

MAC OS X 10.1

WORLD EXCLUSIVE PREVIEW INSIDE

# Macworld

MORE NEWS, MORE REVIEWS

## *Silver machine*

**Dual-800MHz Power Mac**

867MHz G4, faster than 1.7GHz P4

**New iMacs revealed**

Four new models on sale now



### ALSO INSIDE:

- Expert PowerPoint tips
- Consumer scanners tested
- Microsoft Office 10 first look
- Painter 7 • QuarkXPress 5
- Mac OS X secrets • Myst III
- OS X Server • iDVD 2



**Simon Jary**  
editor-in-chief

Mac OS X and today's emulation software make Macs into cross-platform kings.

## How the rest is won



**'By Christmas, the Mac will be the most compatible computer anywhere there's a power socket, or place to rest your iBook'**

Looking hard at Apple's rather paltry share of the personal-computer market – believed to be between 3 and 5 per cent – it's easy to dismiss the Mac as the least-compatible PC platform this side of the ZX81. Obviously, software developers want to sell as many copies of their programs as possible, and so target the massed ranks of Windows users before stooping to consider the slimmer pickings of the Mac faithful.

This isn't the case in those powerful markets where Apple's share of the user base is a lot higher than 5 per cent, and sometimes is over 50. The lucrative publishing and graphics market is one such area where Apple holds sway. Other major fields where Macs often outnumber PCs are Web design, education, broadcast and music.

But for business applications and games (to take two disparate, but massive market segments), the Mac is often overlooked in the rush for the Windows dollar. There are notable exceptions. Microsoft leapfrogs the technology in its Office business applications between Mac and Windows versions. Office 98 for Mac was technically superior to Office 97 for Windows; Office 2000 for Win was more advanced than Office 98; but Office 2001 for Mac was better yet – until Microsoft released Office XP recently.

This autumn, shortly after Apple ships Mac OS X 10.1, Microsoft will release Office 10 for Mac. While the next Windows version of Office may include neater features, it'll be years before Office 10's functionality is surpassed. As you'll read in our first-look at Office 10 on page 28, much of the power of this new version is down to the strengths of Mac OS X – particularly, the Quartz 2D-graphics layer that allows for alpha-channel transparency. Excel charts look absolutely stunning, and even Word starts to look like Adobe InDesign with a great spellchecker. When Microsoft moves its much-shoved-about users from Windows 98 to Windows XP later this year, it won't have anything like Quartz to play with.

Suddenly, courtesy of Mac OS X, Apple's business credentials look impressive. I'm certainly not suggesting that a legion of enlightened enterprise IT managers will create a mountain of smashed Compaqs and Dells in a rush to install all-Mac networks. But smaller businesses could stay Mac-centric in all departments.

As for games, look at the success of shoot 'em ups such as Quake and Doom. Sure, we had to wait a while for these popular PC games to port to the Mac, but we nearly always get the cream eventually. And don't forget that Quake and Doom wouldn't have existed without Bungie's original, Mac-only Pathways into Darkness and Marathon games. Mac OS X's superior graphics engine and fast support of the OpenGL 3D standard should lure those top PC games, such as Half-life, that have so-far missed out the Mac.

If you want to play PC games or use PC-only business applications on your Mac, emulation programs – such as

Connectix's Virtual PC – let you run just about any non-Mac program right there on your iMac or PowerBook. Emulation software is unfairly maligned as way-too slow for human consumption, but those days of banging your head against the desk while a Windows NT app started-up in emulation are long gone.

If you ever wondered what you were meant to do with all those extra G3 and G4 megahertz that Apple keeps stuffing in its new systems, then emulation is a great example of performance payback. The sophisticated architecture of Mac OS X will also boost emulation speeds, so that many won't notice the difference. Connectix showed-off Virtual PC for Mac OS X (VPCX) at the recent Macworld Expo in New York, and its possibilities for the Mac platform are almost endless.

Install VPCX, and it's then possible to run Windows 98, Windows Me, Windows 2000, Windows 95, Windows NT, even Windows XP when it ships, DOS, and various Unix and Linux operating systems ... and, of course, Mac OS X... oh, and Mac OS 9.0. And if you own a copy of Connectix's Virtual Game Station, you can even run Sony PlayStation games on your iMac.

VPC emulates the Pentium-class processor, not the operating system (which you install onto your hard drive) – so if a new OS comes on the scene, you just pop it on your Mac and let VPC do the rest. It really is Windows 2000 running on a Mac, as the emulation is in the architecture not the operating system.

Suddenly, the Mac becomes the most powerful cross-platform computer out there. Connectix has a Virtual PC for Windows (I know it sounds crazy, but there's an awful lot of different Windows versions out there), but it can't run any version of the Mac OS. Any G3 or G4 Mac can run the lot.

Being able to run combinations of operating systems on a single computer concurrently makes switching platforms as easy as switching applications. Imagine the benefits for Web designers, and, of course, software developers. If the Mac became the number-one choice for testing new applications – one machine for all platforms – my guess would be that more and more programs would be created for the Mac. And that's not even taking into account any Java-based applications – remember that OS X is the only high-volume desktop operating system to ship with the latest Java 2 support.

Mac OS X has many must-have benefits for us all, but its ability to turn round the argument that the Mac suffers compatibility limitations is one of the best. In the long-term, it will mean more programs port to the Mac simultaneously with Windows or Unix-based operating systems. By Christmas, Apple should be the largest-volume vendor of Unix in the world. And the Mac will be the most compatible computer anywhere there's a power socket, or place to rest your iBook.

MW

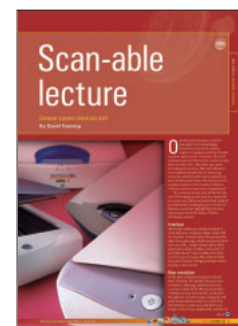
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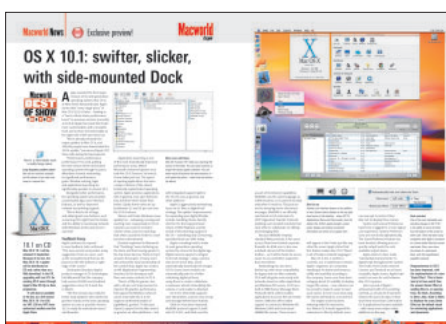
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NEXT MONTH: TWO CDS!

Next month's *Macworld* will feature two CDs brimming with the latest Mac software!

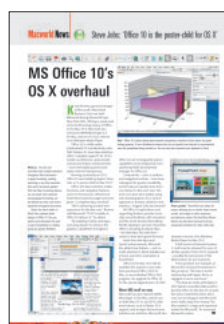
**1** CD 1 has fully working versions of software (top contacts and address book manager, Now-Up-To-Date 3.9.2), trial versions, hot demos, shareware, invaluable updaters, and playable levels of the latest games.

**2** On CD 2, *Macworld* has a pile of plug-ins useable straight from the disc. For Photoshop, QuarkXPress, or Illustrator users, this *Macworld* exclusive CD will be a must! **Subscribe now (01858 435 304)**, or place an order with your newsagent. Issue goes on sale, on September 13.



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**Next dimension**  
HP's PSC750 all-in-one printer includes a flatbed scanner that can accommodate books and other 3D objects.



**Free base**  
The Ricoh Caplio RR10 comes with Ricoh Base, which allows images and audio to be downloaded to a Mac via USB.

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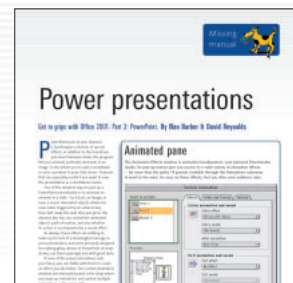
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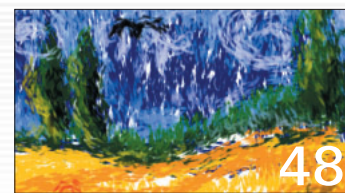
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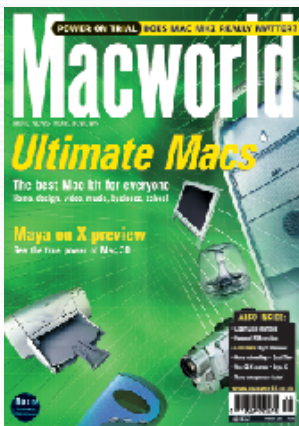


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#### Subject: Mystic Myst

It was with great anticipation that I opened the August edition of *Macworld* to read the review on *Myst III*. As a fan of the two previous titles in the series, I look forward to many enjoyable hours attempting to work out the devious plots in the latest version.

However, I didn't anticipate the frustration setting in just yet. I am not the greatest puzzle solver in the world, and I have read the August edition from cover to cover, but for the life of me I cannot solve the mystery of the missing *Myst* review. Is this some sort of cunning plot? I know it must be there somewhere, but I have to hold my hands up and admit defeat. How about setting up a walk-through on your Web site to help me solve the puzzle?

Andrew Burcombe

**MW:** For reasons known only to Atrus himself, the review of *Myst III* escaped publication last month. Now we've solved the riddle, so you can read our UK-exclusive review on page 65.

#### Subject: User by name...

I subscribe to *MacUser* and *Macworld*, and read the varied reviews and letters with enthusiasm.

But now I am thinking it might be cheaper to employ the technique used by Colin Cousins, who, in one masterstroke, has bagged himself a HP DeskJet 990cm printer (*MacUser*, mailbox, Vol 17 No 15), and also a copy of Office 2001 (*Macworld*, Letters, August 2001).

He has done this by relating the same anecdote regarding the debate of a family standing

#### Your Star Letter wins a copy of Office: 2001, worth £480

We reward the best reader letter with a copy of Microsoft's Office: 2001 for Mac.

This integrated package of business applications includes enhanced versions of the market-leading Word, Excel and PowerPoint programs, as well as the new Entourage – a personal-information manager and email client. Email letters@macworld.co.uk. Please provide full name and contact details.

Or, write to: Letters, Macworld, 99 Gray's Inn Road, London WC1X 8UT.

around a Cube G4 in his local Comet store. All credit to him.

Just a minute – perhaps this technique is not that successful, since Aaron Ireland has tried the same technique (*Macworld*, Letters, August 2001; and *MacUser*, mailbox, Vol 17 No 14) and wasn't rewarded with one prize. Kevin Fairclough

**MW:** Colin Cousins' letter was published in *Macworld* first (with subscribers by July 9), and repeated in *MacUser* in its issue dated July 27. The other letter that you mention was also out in *Macworld* first – but only by one day. It's difficult to stop (in this instance, not the long time-gap Star Letter), as readers often send letters to both magazines. However, it does prove that *Macworld*, at least, prints only genuine reader letters – or maybe that *MacUser* doesn't receive quite as many...

#### Subject: Taking the XP

We keep being told that Microsoft is totally committed to the Mac platform, as stated by the demonstrations given of native versions of Office. However, it looks like Office for OS X will not be released until Windows has released its own "all-new" operating system, so not to take attention from its main business – thus holding up the migration from OS 9 to OS X!

Ewan Latham

**MW:** Nice conspiracy theory, Ewan. However, it's actually Apple's fault. Office 10 (see page 28) works only with version 10.1 of OS X, which isn't due for release until September.

#### Subject: XXXX-off Apple

An upgrade pack for Mac OS X 10.1 will cost £15 to existing users via the up-to-date program. Once we are running 10.1, we should finally have a complete product, which I thought I was buying in the first place. I feel ripped-off. Alain Cooke



#### Star Letter: California dreaming

I've just returned from a five-week trip to California, where I got to experience a wide selection of computer retail stores – including a visit to Apple's shop in the Glendale Galleria.

I don't see how these Apple stores can be a mistake – the experience is second to none. First, the stores gleam in real life as much as they do in the photos. Second, every model was not only in stock, but on display for trial – and we all know how rare that is!

The staff were very helpful, and on the two occasions I visited the store – both weekdays during school terms – it was packed. Best of all, the goods are extremely well priced when compared to CompUSA, Best Buy and the like in the US.

I hope UK dealers can Think Different about selling their stock, and make Apple think twice about UK Apple retail.

Hamish Robertson



#### Subject: Carbon slated

Before everyone gets all slap-happy about Corel's announcement that Painter 7 has been Carbonized for OS X, we Painter users who work on OS X machines should all remember that – as of this date: (a) Painter's almost useless without a Wacom tablet; (b) Wacom still hasn't made a driver that works in Mac OS X (Classic or Native).

David Marshall

#### Subject: Cube route

I bought a Power Mac G4 Cube for my wife knowing the Ethernet connection to my older 9600 would provide all the writing functions I needed.

Now the Cube sits on top of a Sony CD writer, which works only with the built in FireWire port of the Cube.

When I need to do some serious recording, the Cube does it. The interface ports of the Cube allow it to be extended as needed. The additions do not have to be housed in the Cube's case.

Apple made the right design decision with the Cube, and when the world finally catches up, production can resume.

Frank Philpot

#### Subject: Squared to death

Since the Cube's death, many have been praising it for what it might have been, not what it was. Sure, it might have become "a home-entertainment centre for loft living", it might have had a TV tuner built-in, it might have had Bluetooth, or HomeRF, or infrared, or any of dozens of other ways of making it the centre of your digital home. But it didn't. It was simply what Steve Jobs called it at its launch: "a mid-range G4" in a compact case.

And thanks to that compact case, it lacked the expandability of a Power Mac G4, yet was more costly than a Power Mac G4. The public weighed it up, and, decided they didn't want it.

I'm sorry to see it fail, but it's not the media's fault – it was showered with awards. The critics' reaction mirrored that of the public: many loved it, most admired it, but few thought it made sense to them – even after Apple slashed the prices.

The Cube might have been a contender, but Apple built a product that didn't sell enough to warrant making it any longer. End of story. Time to move on.

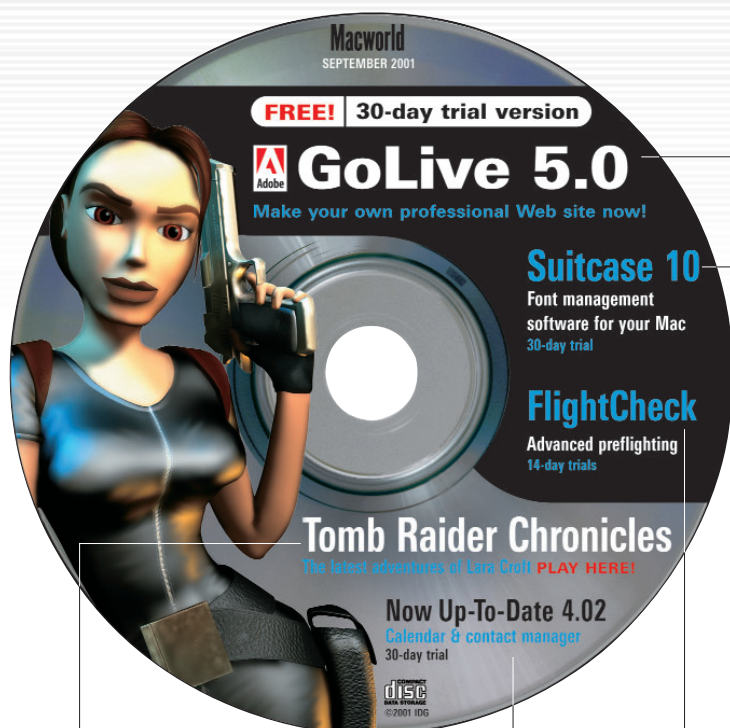
Alex Summersby

MW



Trials of Adobe GoLive 5, Extensis Suitcase 10, Now Up-To-Date 4 and FlightCheck Classic 4 head up a monster CD along with a playable Tomb Raider Chronicles demo and all the regulars. Vic Lennard opens the folders...

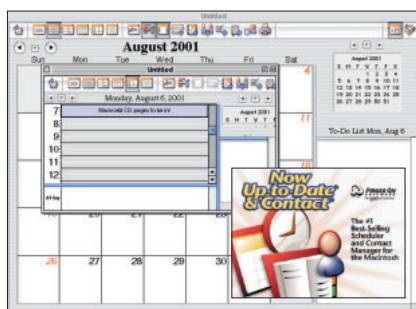
## MAIN ITEMS



### Tomb Raider Chronicles demo

Lara's friends gather to reminisce about her past exploits, each memory providing a new adventure. In this latest addition to the Tomb Raider series, use new nimble moves like tightrope walking, parallel-bar swinging and hand-to-hand stealth attack. New weapons, including a grappling hook gun, sniper rifle and chloroform, have been added. An enhanced inventory system provides greater combinations of weapons and items.

The demo allows you to play a section of the game. Requires at least a 266MHz G3 with Mac OS 8.6 or later, and 64MB available RAM. Check Read Me for full spec. OS X version included.



### Now Up-To-Date 4 trial

Versatile and powerful Personal Information Manager that allows you to organize your schedule and contacts and then keep them 'up-to-date' by issuing reminders. Includes synchronization with a Palm-compatible computer. Manage your schedules and contacts or easily share them with small groups or large organizations.

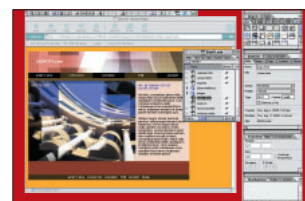
Try the full package for 30 days.



### Adobe GoLive 5.0, 30-day trial

In the e-business economy, sophisticated, data-driven sites are a necessity. Adobe GoLive 5.0 offers both coders and designers the content-creation and site-management tools they need. There's over 100 new features. Keep your code clean and lean with 360 Code; visually design dynamically generated Web pages with Dynamic Link for ASP; and enjoy seamless integration with Adobe Photoshop, Illustrator and LiveMotion.

Requires a Power Mac with Mac OS 8.6 or 9.0, and 48MB available RAM.



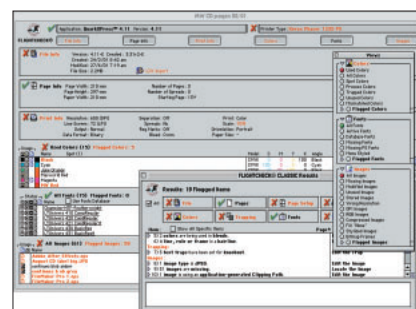
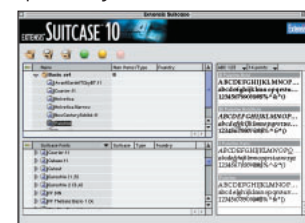
A number of issues of this month's *Macworld* were sent with incorrect CD labels, stating that Peak 2.6 was included. Peak 2.6 will now be included on the cover CD of October's *Macworld*.



### Extensis Suitcase 10 30-day trial

Suitcase 10 is packed with automated features that help you activate, organize and preview your fonts. Suitcase handles your fonts so you don't have to. New features include auto font activation, dedicated control strip module, collect for output, font conflict handler and corrupt font tracker.

Requires a Power Mac with Mac OS 8.6 or higher.



### FlightCheck 14-day trials

FlightCheck Classic 4.0.2 scans native digital documents including QuarkXPress, PageMaker, Photoshop, Illustrator, FreeHand, PDF and Postscript, alerting you to over 150 potential problems and suggesting possible solutions.

Also here are five demos from XChange International including Imposer 2.1.3 and Crackerjack 3.2.

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# Cover CD

## SEPTEMBER 2001

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### INSTALL

Before you start working your way through the software on our CD, go to the System Utilities folder and make sure you install the following:

#### ■ Acrobat Reader 5

Install this version to be able to read many of the on-screen manuals.

#### ■ Stuffit & RealPlayer

Version 6.0.1 of Stuffit Expander and DropStuff is included as is the installer for RealPlayer 8.

#### ■ System tools & ATM Lite

The CD also carries the latest version of InternetConfig, UnZip 5.32 and ATM 4.6.2 (required for Suitcase).

#### ■ QuickTime 4.1.2

Some programs require QuickTime 4.1.2. This can be downloaded from [www.apple.com/quicktime/download](http://www.apple.com/quicktime/download).

## INSIDE MACWORLD



#### Audion 2.5

Single tool for all your audio playing needs. Can now transfer files to portable MP3 players. Native OS X version included. Shareware.

#### Mesa

Mac OS X spreadsheet with multiple 'tabbed' worksheets in a workbook, graphing capabilities and import facilities. Restricted trial.

#### Super Get Info 1.0

Mac OS X utility designed to serve as a replacement for the Finder's Show Info command. Includes a number of useful features. Demo.



#### FuturePaint 2

Paint package with oodles of features. Good example of FutureBASIC programming. Freeware.

#### CESoft 30-day trials

InOutTracker – centralized personnel tracker; QuickConference – cross-platform conversation tool; Prairie Server – server application for both.

#### MYOB 10

Twenty-open trial versions of MYOB Accounting and Accounting Plus. Ideal for small businesses, offering powerful accounting in a flexible package.

#### plus...

BrickHouse 1.1b5  
Latest Sapphire demos  
PcConverter 2.1.0  
QC 4.2.2 demo  
QC Collect 4.2.3 demo  
Sound Studio 1.5.5

## CD CATALOGUE



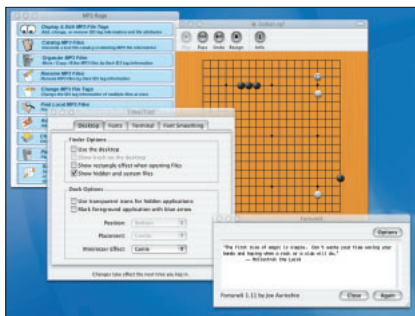
Courtesy of Mark Pirri's superb DiskTracker program, Macworld brings you a searchable catalogue of all our CDs from 1997 to 2001 – almost 230,000 files! This will grow month by month to allow you to find any file you want, without wearing out your CD-ROM drive. The latest version of DiskTracker (2.1.1) is also included – don't forget to register if you find our library useful.



## OS X HEAVEN



## SERIOUS SOFTWARE *includes*

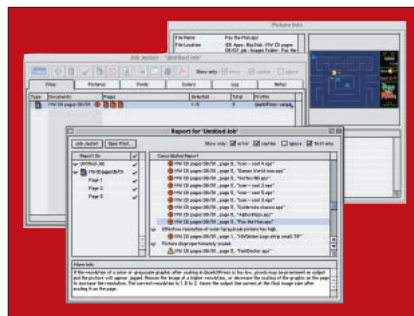


OS X Heaven – your monthly one-stop shop for the latest OS X-specific software. Utilities, demos, shareware and games – OS X Heaven features the best Carbonized goodies for the Mac's new OS.

This month there's 28 demos and shareware utilities including **MP3 Rage 3.6**, a cool collection of tools for MP3 enthusiasts, **iCab Preview 2.5.2**, a new Web browser for the Mac, and **TinkerTool** for altering OS X's appearance.

There are also six Carbonized games including **Airburst**, a superb arcade game, **Goban**, the Go board game on Mac, and a port of **Quake 1.0**.

Finally, make sure you try **FortuneX**, OS X's native fortune teller...



#### Preflight Pro 2.2 trial

Extensis Preflight Pro is a comprehensive preflight solution specifically designed to save significant time, money and materials by inspecting documents and correcting problems to ensure they are error-free prior to printing. Preflighting is the essential production process of checking electronic document files for completeness in order to locate and correct problems before printing.

Version 2.2 now accurately inspects Adobe Illustrator 8/9 .ai and EPS files and has modified PDF support to match Preflight Online.

The trial is fully functional but times-out 30 days after installation.



#### MegaSeg 2.0.1 demo

MegaSeg is the premiere DJ music player for the Mac that allows you to consolidate all your music on the hard drive of your computer, and then segue or beatmix between them for a professional DJ presentation without the need for extra CD players or mixers. Load your CD tracks into MegaSeg and with the built-in database and search engine, you'll be playing requests faster than ever! MegaSeg can also play MP3 and QuickTime files downloaded from the Internet.

This demo is fully functional but a pop-up window appears every 15 minutes.

Requires a 233MHz G3 or better, with Mac OS 8.6 or later and QuickTime 4.1.



# Cover CD

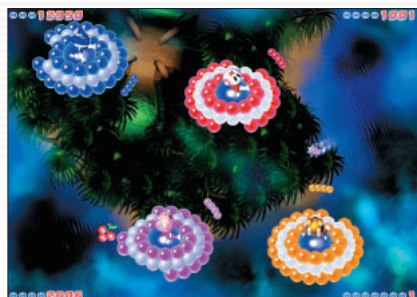
## SEPTEMBER 2001

### FAULTY COVER CD-ROM? ▼

• If your cover disc is broken and you want a replacement CD, please contact Kelly Crowley, on 020 7831 9252, or email at [kelly\\_crowley@macworld.co.uk](mailto:kelly_crowley@macworld.co.uk).  
• If your cover CD doesn't seem to work as it should, please check you have read all the instructions on the cover disc pages carefully first. If it still doesn't work, then please email Woody Phillips at [woody@macworld.co.uk](mailto:woody@macworld.co.uk).



## GAMES WORLD ▼

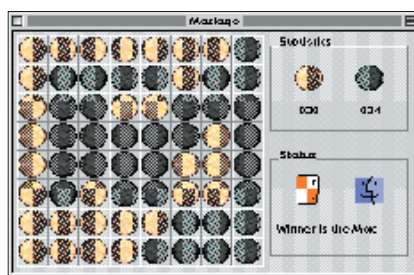
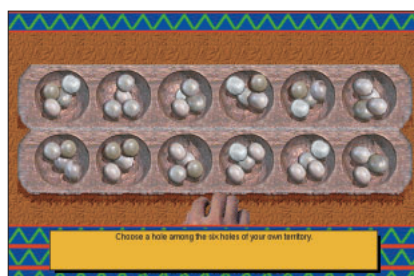


### Hot Games!

In **Airburst** you have to protect your rings of balloons from the razor sharp flying balls and try to burst your opponents out of the sky! Play in 12 different game types with 1-4 players.

**A60 Rescue Mission** is a futuristic 3D action game. Take control of a highly manoeuvrable and powerfully-armed vessel, save all probes and avoid computer-generated enemies through increasingly challenging levels.

**Steel Fighters** is a traditional space shoot-'em-up where two to eight players fire at each other while trying to manoeuvre their own ship in narrow caves. Continuous action – protect your own ship while trying to destroy the others!



## DEMOS & GAMES ▼



This month, Macworld's Top 10 Shareware Games folder is packed with ice cool strategy games.

Conquer the age-old African stones game in **Awale 3.1**, and give your Mac a run for its money in **Maclago 2.5**. Win a four-colour memory battle in **Mimic 1.2**, and remake the nine-square puzzle as fast as possible in **clicknslide**. Also enjoy the latest versions of **NetFungus** (1.0.4) and **Take Away!** (1.8.2).

There's **Kenzo 4.0.1**, a Yahtzee-style dice game, **X-Words Deluxe 2.0** for the Scrabblers among you, and **Paragon Poker Suite**.

Finally we've included **Colibricks 1.3.1** and two useful utilities: **Game Doctor 1.3.2** and **The Codebook 4.0.4**.

(Top row) **A60 Rescue Mission** & **X-Words Deluxe 2.0**  
(Middle) **Awale**  
(Bottom) **Maclago**

## ALSO ON THE CD ▼



### COMMS & INTERNET

Nine programs including:  
**HTML Creator 2.7**  
**HTML-Optimizer 5.4**  
**NotifyMail 4.0.6**

### EDUCATION

Four items including:  
**Language Assistant 2.1.2**  
**QuickTTest 1.7**

### FONTS

Four items including:



**FontShowcase 3.2**  
**TypeTable 1.1.2**

### GRAPHICS

Six applications including:  
**Meshwork 1.8.1**  
**PhotoGrid 2.02**

### ICON UTILITIES

**IconBuilder Pro 3.0**

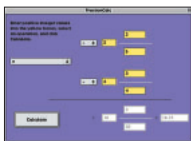
### INFO



**ATPM 7.06**  
Extension Overload 5.8.5  
plus eight utilities for developers

### MATHS & SCIENCE

Six items including:  
**earthbrowser 1.5.3**



**FractionCalc 1.1**

### SCREENSAVERS

**FlavorSavers 2.7.4**  
**Desktop Screen Saver 2**

### SOUND & MUSIC

Eight programs including:

### FreeMIDI 1.46

**MOTU Audio System 2.3**  
**MP3 Rage 3.6**  
**Virtual Composer 2.8.7**  
**VSamp 3.2.1**

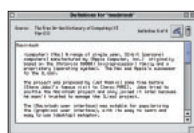
### UTILITIES

11 categories with 50

useful tools for your

Mac including:

**AutoCat 3.0.2**  
**Calendar2000 1.4.5**  
**Convert 1.2.9**  
**CoolCam 1.9.1**  
**Days To Go 2.1.3**  
**Default Folder 3.1.2**  
**DiskSurveyor 2.5**  
**File Buddy 6.1.1**  
**File Freak 3.3.1**  
**iOrganize 3.4.1**  
**Jeremy's CSM Bundle 2.1.7**



**MacDICT 2.0**

**Photoshop Import Filter**

### PrinterSwitch 1.6

**PrintToPDF 2.2.3**  
**qxplconator 1.0.3**  
**Rosetta 1.2.3**  
**TechTool Lite 3.0.1**  
**TimeSlice 2.0**  
**Wapp pro 3.3**

### UPDATERS

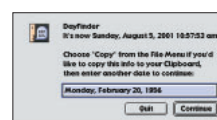
This month's dedicated  
updaters folder includes  
over 45MB of patches  
to bring many popular  
applications bang  
up-to-date, including:

**Amap3D 6.1**  
**CubaseVST 5.0r1**  
**DocuSlim 2.14**  
**DoubleTalk 1.1**  
**FlightCheck Classic 4.02**  
**iMic Control 1.3**  
**MacDraft 5.0.2**  
**MovieWorksDeluxe 5.1**  
**Norton AntiVirus 5-7 (07/01)**  
**PlayerPRO 5.9 Com**  
**TableMaker 5.5**  
**VideoScript 2.1**  
**Virex (07/01)**  
**VirusBarrier (07/01)**

## DON'T MISS... ▼

### Cool Extras

**DayFinder 1.1.2**  
Day of the week calculator  
**One Trick Pony**  
Hot folder emailing  
**Latest iconfactory icons**  
Two new sets of goodies!



### Mac ISP

Internet access offer from AppleOnline.

### Netscape/Internet Explorer

Complete packages for Netscape 6 (with 6.01 update) and IE 5.

### Plus...

... many thanks to Simon Youngjohns for our CD icons.

## SHAREWARE



Shareware is a distribution method, not a type of software. It makes fitting your needs easier, as you can try before you buy. Shareware has the ultimate money-back guarantee – if you don't use the product, you don't pay for it. If you try a Shareware program and continue using it, you are expected to register. Support shareware authors so that they continue to provide high-quality programs for the Mac.



# More free games for UK iMacs

Macworld SEPTEMBER 2001 19



# OS X 10.1: swifter, slicker, with side-mounted Dock

Macworld  
**BEST  
OF SHOW**  
2001



Here's a new folder with a really long name.

**Long-forgotten problem solved**  
Not only are columns resizable, but file names in Icon view now wrap to a second line.



## 10.1 on CD

Mac OS X 10.1 will be released in September. Because of its size, the Mac OS X 10.1 update will be distributed on CD only, rather than as a Web download. In the UK, upgrading will cost £15 for existing OS X users through Apple's Mac OS Up-to-Date programme.

It will also be available in the box as a full version Mac OS X 10.1 for £85 (ex VAT; £99 inc VAT) from authorized resellers and the Apple Store.

Apple unveiled the first major revision of its next-generation operating system, Mac OS X, at New York's Macworld Expo. Apple claims that "every single piece" of Mac OS X 10.1 is faster – leading to a "two-to-three-times performance boost" on previous versions (currently at 10.0.4). Apple has made the Finder more customizable, with a movable Dock and a return to functionality at the right side of the top-menu bar.

"We've already released four major updates to Mac OS X, and 300,000 people have downloaded the 10.0.4 update," announced Apple CEO Steve Jobs during his Expo keynote.

"Performance, performance, performance!" he cried, putting the new version of the Unix-based operating system through its paces. Attendees cheered, welcoming its significant performance gains. Window resizing, login and application launching are significantly speedier in version 10.1.

Alongside better performance, the operating system also provides customizable Aqua user-interface features, as well as improved network and printing support.

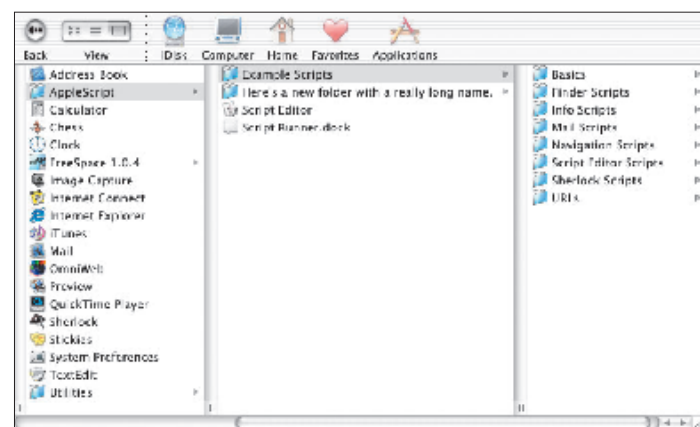
"We've fixed a lot of bugs, and added great new features, such as burning CDs right from the Finder, and the ability to seamlessly network with Windows clients and servers," said Jobs.

### Feedback frenzy

Apple continues to respond to user feedback, Jobs confirmed: "This new version incorporates many suggestions from our users, such as the moveable Dock that can be placed on the left, bottom or right edge of the screen."

Christopher Bourdon, Apple's product manager of OS technologies, told *Macworld* that the company had received 50,000 user-feedback suggestions since OS X went live in March.

"The first version was really for techie early adopters who wanted to get their hands on the new operating system as soon as possible. Version 10.1 is ready for mainstream users," said Bourdon.



Application-launching is one of the most dramatically improved performance areas. Where Microsoft's Internet Explorer once took five OS X 'bounces' to launch, it now takes just one. The speed of opening applications has been a major criticism of the robust, technically sophisticated operating system. Apple promises applications will, in general, now open between two and three times faster than before. Quake frame-rates are up by between 12 and 26 per cent over the 10.0.4 release.

Menus and Finder Windows move quickly too – redrawing, resizing and reacting more responsively in X 10.1. Columns can now be resized in column views, and one small bug that often caused the Finder to crash has been exterminated.

Bourdon explained to *Macworld* that "Dockings" were cluttering-up the Dock, and that moving panels to the top menu bar (see "Back on top") answers the prayers of many users who missed the easy functionality of the Control Strip. Apple has created an API (Application Programming Interface) to let developers add their own menu controls to OS X.

There's a filip for gamers too, with a 20 per cent improvement in OpenGL 3D graphics performance.

Full support for Nvidia's GeForce3 card is now built into X. A 3D engineer at Newtek (maker of LightWave), gushed: "In the past, OpenGL support for the Mac wasn't as good as on other platforms – but

### More room with Views

Mac OS X version 10.1 helps you read long file names in the Finder. You can resize columns so longer file names appear unbroken. You can either resize all columns the same amount, or – with option key down – resize only one column (as above).

with integrated support right in the OS, it's now as good as any other platform."

Apple is aggressively maintaining focus on its 'Mac as digital hub' strategy. The update's improvements for expanding your digital lifestyle include: bundling iTunes directly into the OS; the long-promised return of DVD Playback; and the arrival of Disc Burning support in the OS – something only CD-burning specialist Roxio can offer today.

Apple is working hard to make its next-generation operating system the choice for the digital age. Digital camera support is integral to its hub strategy – plug a camera into an OS X 10.1 Mac, and it automatically downloads the images. OS X's Screen Saver module can automatically point to a folder containing digital pictures, using these to create a slideshow screensaver almost immediately the camera or card-reader is attached.

OS X 10.1 inherently supports over 200 printers, and can now set-up and manage AirPort Base Stations.

iDisk on X has been improved. WebDAV protocol support is built into OS X 10.1, and iDisk uses this



as part of its Internet capabilities. WebDAV uses the same language as a Web browser, so it connects to iDisk only when it needs to. This puts an end to annoying server-disconnect messages. WebDAV is an officially sanctioned set of extensions to HTTP (Hypertext Transfer Protocol), enabling users located remotely from each other to collaborate on editing and managing files.

Because WebDAV employs standard Web protocols, it lets users access iDisks from behind corporate firewalls. An iDisk icon is also now a default element of the Finder's toolbar – so it will be faster to access, easier to use and better supported than ever before.

Networking has also been beefed-up, with more compatibility for legacy and non-Mac networks. OS X will integrate more easily into networks based on older AppleShare and Windows NT servers. 10.1 has a built-in SMB (Server Message Block Protocol) Client, which enables applications to access files at remote servers. SMB also offers native support to connect to Windows NT, Windows 2000 and Unix-based SAMBA file servers. These servers



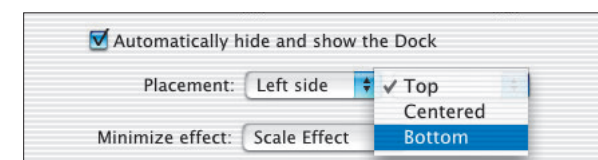
### Back on top

Another user-interface feature is the addition of new System status displays to the top right-hand corner of the desktop – where OS 9's Applications Menu and Clock reside. Icons for battery life, AirPort signal strength, system audio, display and modem-connection information can all be set to appear here.

will appear in the Finder just like any other file server. Apple states that this feature makes Mac OS X "fluent in all of today's network languages".

Mac OS X 10.1 is neither a cosmetic, nor a maintenance release. Apple's engineers are constantly tweaking it for better performance, utility and usability, according to the company. Some users have been unhappy about X's inability to display longer file names – now columns can be resized to make it easier to read such names. In 10.1's Icon view, long file names will wrap to a second line.

The engine room has been tinkering with File extensions, too. Where OS X would append file extensions to files by default, users



can now opt to instruct their Mac not to display these names.

System and General Preferences have been re-jigged for a more logical user experience. System Preference icons are now listed alphabetically. The Sound Preference feature has been boosted, allowing users to specify output levels for each available output device.

Apple claims to have made "substantial improvements" to AppleScript throughout the system. The Finder, Print Center, Internet Connect and Terminal are all more scriptable, Apple claims. AppleScript events can even be sent between Mac OS X systems.

Jobs is proud of Apple's achievement with OS X, pointing out that, as of July 18, it had been released for just 116 days. In that short time more than 1,000 native OS X applications became available – with many more major native additions on the way. MW

### Dock unlocked

One of the most noticeable user-interface changes in OS X 10.1 is the ability to move the Dock from the bottom of the screen to either side. There had been many complaints that Apple's insistence on a lower-locked Dock ate screen real-estate. Now, users have the choice of a side-based Dock, with full magnification capability retained.

Responsiveness in OS X has been improved, with the implementation of a new 'Scale Effect'. This is faster (and a lot less weird) than the present Genie Effect at sending files to, or opening from, the Dock. According to Steve Jobs, Scale is likely to displace the crazy Genie Effect as the default visual for minimizing applications and documents.





# Apple into iDVD 2 overdrive

## Let's hand it to the developers

Macworld Expo New York played host to an abundance of sought-after hardware and software. Dantz released a Carbonized beta version of Retrospect, its back-up utility. Epson and Agfa both exhibited scanners running beta OS X drivers, while Toast developer Roxio announced a preview version of Toast 5 Titanium for OS X.

The Essential Reality stand was mobbed by showgoers gaping at its P5 Glove (pictured) – which is a high-tech glove aimed at gamers. Using



sensors, it can measure finger flex and hand position, and control on-screen action.

Apple CEO Steve Jobs gave a sneak preview of iDVD 2 for Mac OS X during his keynote speech.

iDVD 2 features more themes, soundtracks in slideshows, background encoding, customizable positioning of buttons, and support for 90-minute DVDs (using compression).

"In less than one hour, iDVD 2 users can now create a custom DVD with super-cool menus that rival anything coming out of Hollywood," said Jobs. "iDVD 2, with Mac OS X and the new super-fast Power Mac G4s, gives users the ultimate DVD creation studio – right on their desk. It's the perfect example of our digital-hub strategy."

iDVD 2 will not ship until Mac OS X 10.1 is released in September.

It has been developed with advanced encoding-software that marries the G4 processor and OS X, for faster encoding speeds. The software-based solutions will author DVDs at one-to-three times the time-length of the video being authored.

iDVD 2 requires Mac OS X 10.1, and will be available in as a £15 upgrade for iDVD users through Apple's Mac OS Up-to-Date program. It supports drag-&-drop, and title screens.

Jobs demonstrated some of the many new themes, including Brushed Metal, Parchment, Modern One and Two, and Claim Check. Several of the themes include motion, such as Family, Wedding, and Global. Apple's iDVD product manager, Mike Evangelis, told *Macworld* that 15-20 themes are planned.

iDVD ships with all SuperDrive-equipped Power Mac G4s. It's not designed to work with third-party DVD-R drives, but Apple's DVD Studio Pro supports these.

Jobs revealed that Apple has already shipped between 100-200,000 SuperDrive-equipped Power Mac G4s. He discussed the "explosion" of the DVD market, showing stats that suggests 25 per cent of US homes will have DVD players by the end



### Smart movie

iDVD 2 allows for video thumbnails to run in the background.

of the year. Jobs claimed that Multiprocessor G4s can now encode MPEG2 video on DVD faster than real-time – twice as fast as with the original SuperDrives.

■ Apple is to acquire DVD-software maker, Spruce Technologies. The company develops DVD-authoring software for the pro video-editing market, but its products currently support Windows machines only. The acquisition is expected to bring more DVD know-how to Apple. **MW Jonny Evans**

## Macworld's Best of Show

Macworld's international editors gave their coveted Macworld Expo Best of Show awards to the following products: Mac OS X 10.1 (see page 20-21), and the 867MHz Power Mac G4 (see page 70). Editors were impressed by the G4's increased performance, and that its lower price bringing DVD-RW technology to a broader range of Mac users.

**Asante FriendlyNet Wireless Ready Cable/DSL**

**Router** Offers extra security for networks. **Canon D2400UF** This scanner goes beyond text and graphics scanning capabilities,

including a built-in, large-format film adaptor.

**DiamondSoft Font Reserve Server for OS X** Can provide effective font-management across an entire organization.

**IBM ViaVoice for OS X** IBM's voice-activation software is faster and more efficient than the previous version.

**MicroMat Drive 10** This advanced disk-repair and recovery product has been designed for Mac OS X.

**Microsoft Office 2001 for OS X** Due this autumn, the updated suite of business applications boasts some exciting and useful features.

**SmartDisk FireLite** One of



Canon D2400UF

the Mac market's smallest and most portable external hard-drives.

**Toon Boom** Designed for Mac animators, this powerful software increases digital-animation productivity.

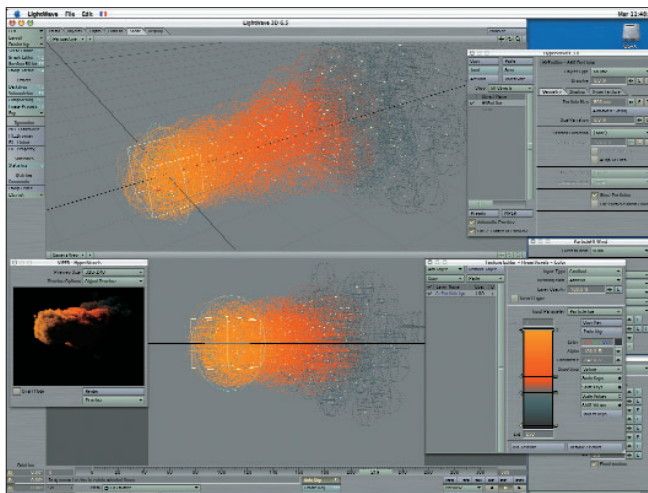
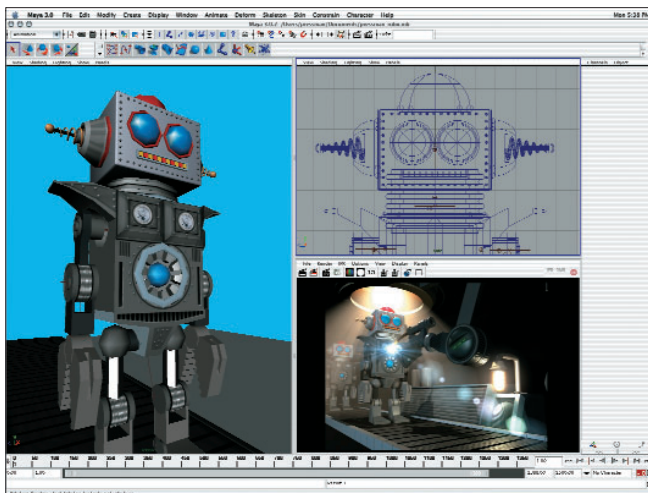
**Xerox Phaser 860** OS X-friendly network colour-laser printer produces output of amazing quality. **MW Jonny Evans**



Xerox Phaser 860

FriendlyNet Cable/DSL

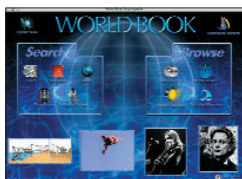
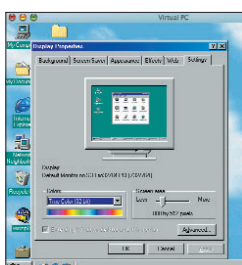




### Two of the best

Two key 3D-animation apps for OS X have been recently demoed in public: Maya (above, left), during Steve Jobs' Expo keynote, and Lightwave 6.5, at a special Apple UK press briefing.

# Xpo shows the power of ten



### Keynote's key products

Among products demoed for OS X during Steve Jobs' Macworld Expo keynote were, from the top: ViaVoice, Virtual PC 4, World Book, and Cleaner.

Apple CEO Steve Jobs used his Macworld Expo keynote to reassure Macintosh users that major applications for Mac OS X are about to ship, inviting ten big-league developers to demo their titles on the stage.

First up in the "Ten for X" segment of the keynote was Kevin Browne, general manager of Microsoft's Macintosh Business Unit. Browne showed-off the Carbonized Office 10 for Mac OS X, which is due to ship this autumn. Among the user benefits highlighted by Browne was Office 10's Quartz 2D drawing layer, that enables Word and Excel to display transparency effects and anti-aliasing (see page 28).

Although not exhibiting at Macworld Expo itself, Adobe was represented at the keynote by vice president of worldwide products and marketing, Shantanu Narayan. He talked about Adobe's network-publishing mantra: "Access to information anytime, any place, and on any device". Adobe demoed X-native versions of Illustrator — which launched twice as fast as under OS 9, according to the company — GoLive and InDesign. However, there was no sign of Photoshop running on OS X.

Quark senior product manager Brett Mueller showed a pre-beta version of QuarkXPress 5.x, working with layers and creating Web pages directly via XML (see pages 26-27).

FileMaker president Dominique Goupil promised that all the

company's products would be OS X-native "by autumn". He said 50,000 copies of the X-ready FileMaker Pro 5.5 had already been sold.

Kurt Schucker, vice president of product management at Connectix, demonstrated Virtual PC on OS X, using a version of AutoCAD on Windows 98 on a Mac running OS X. He then announced that a technical preview — called VPC Test Drive — is now available as a free download for all registered users of VPC 4.0.

IBM Voice and Pen Division manager, Toby Maners, showed-off ViaVoice for Mac OS X. A colleague dictated an email message into OS X's Mail program, and manipulated a QuickTime attachment using voice commands only. The product will be available "later this year".

### 'Incredible' X apps

Michael Ross, publisher of World Book, showed an OS X version of the Knowledge Explorer reference software aimed at schools and homes, which Jobs called "incredible".

Blizzard Entertainment's Frank Pearce showed-off Warcraft III, which he claimed will be released simultaneously on Windows and OS X. "Mac gaming has never been as interesting as it is today," he told the audience. (See page 32).

Aspyr president Mike Rogers showed Tony Hawk's Pro Skater 2 on OS X. He said Aspyr was "inspired to bring out the best games to the best computing platform on the planet".

Last up was Richard Kerris, former



director of Maya Technologies at Alias|Wavefront. "Apple is making Mac OS X the best platform for professional 3D," said Kerris, who ran a Maya movie in OS X.

Jobs also demoed an OS X beta of Media 100's Cleaner. Cleaner adds dynamic, interactive streaming-video and audio to Web sites, and prepares media for delivery in multiple formats.

Following the keynote, Apple UK introduced journalists to other major applications for OS X. These included an OS X version of Lightwave 6.5. Newtek's UK market development manager for the product, Andrew Bishop, said: "In the past four days it hasn't crashed once — I'd usually expect Lightwave to crash at least every three to four days on any OS."

Apple UK also introduced Corel's powerful £255 3D-design application, Painter 7 (see page 39).

Meanwhile, UK developer P&L Software demonstrated its OS X-native spreadsheet, Mesa. This application was the biggest-selling title for NeXT OS. Its list of features include standard spreadsheet capabilities, such as multiple worksheets and charts, as well as a Formula Builder.

Jonny Evans





# New XPress trained on Web

At the recent Total Publishing show in London, Macworld's Jonny Evans met with Quark's vice president of product management, Jürgen Kurz (below, top), and senior product manager for desktop products, Brett Mueller (below, bottom) — and was given a behind-the-scenes peek at XPress 5.0.



QuarkXPress has over two million registered users worldwide, and commands 96 per cent of the pro-publishing market. It's been the industry standard for DTP for over a decade, and helped revolutionize publishing in the 1980s. With XPress 5.0, Quark is aiming to extend its dominance to the field of Web-authoring. Version 5.0 will reach beta testing "within weeks", confirms the company. It is also "at an advanced stage" on XPress 5.5 for OS X.

The most significant feature of XPress 5.0 is its WYSIWYG Web design and layout tools. Quark says that if just ten per cent of its current customers upgrade to version 5.0, XPress will become the world's most widely adopted Web-authoring tool.

Quark's senior product manager for desktop products, Brett Mueller, said: "It'll open up opportunities for designers to get involved in Web-site production. In the next few years, design quality will change the way the Web looks."

Product management president Jürgen Kurz also discussed the company's goals: "We want to provide the best Web-authoring tool in the world. It supports many features used to create Web and print pages."

He went on to praise Quark's engineers: "It's a very clean application, and is integrated into the XPress look-&-feel. If you know XPress, you can build a Web page and publish it to any Web browser within

minutes. You don't need HTML skills. However, if you need advanced features, you can lay out the templates in XPress and pass these on to the coders. We have created nice, clean compact code."

Quark shares Apple's commitment to Mac OS X, Mueller confirmed: "Quark 5.5 will run natively on Mac OS X, so it's not just user-interface dressing — it's the real thing. We're dedicated to OS X. It's a wonderful opportunity for us. If it succeeds in the way we all hope, then it's a business opportunity for us all."

## Apple partner pledge

He added: "Apple understands that applications drive a platform's success. Apple has been an excellent partner in terms of making the transition. There have been some issues, among which are changes in printing engines under OS X. We need to be careful about this in terms of implementing and testing, in order to ensure XPress 5.5's quality. We have a native application that we've spent much time on, but it'll take a while before it's ready for the market while we test these elements."

XPress 5.0 is backward-compatible — it will open documents created in versions 3.0 or later, so designers can work on archived material with version 5.0's tools. Quark hopes this will see a surge of online content, as archived pages make it to the Web.

Another key feature of XPress 5.0 is Tables. "It's fair to say those who

need tables have needed them for a while, and we should have supplied them before," said Kurz. "But this is a great realization of such support."

Quark is determined to shrug off its reputation for buggy upgrades, earned with the release of XPress 4.0 — infamous as one of the flakiest major upgrades ever released. Quark believes extensive in-house and beta testing on XPress 5.0 will help.

Kurz said: "When Quark released 4.0, I think at the time the company just wanted to ship it, and hadn't tested it enough. This has changed."

"XPress 5.0 remains in alpha testing, mainly with print bureaus. It has to print in, and to, all kinds of different devices. But it should be only weeks until we get it to beta. We want to ensure it's robust and can provide quality service. We want it to be release quality when it hits beta."

Mueller agreed: "We are working hard to make XPress 5.0 as bug-free as possible. Testing is obsessive at this stage. We agonize over bugs. It's good. Everybody cares."

## 'Slow coach' accusation

But the company remains accused of being slow to ship upgrades. XPress 4.0 shipped in 1997, while version 3.0 hit the market in 1990.

However, Kurz stressed that Quark is a victim of XPress's success when it comes to upgrades: "XPress is the final application used to bring everything together before the finished publication goes to print."

## Quark alters server approach

As well as previewing XPress 5.0 at Total Publishing, Quark also gave UK publishers a first glance at Quark Active Publishing Server (APS).

APS is a server-based technology that uses core elements of XPress 5.0 to allow designers to work on XPress documents for Web and print via a browser.

Brett Mueller, senior product manager of Quark desktop products, said: "We codenamed Quark APS Roswell — it was a total skunkworks project all the way."

Through a Web browser, content creators can flow words and images into documents, edit existing content or even adjust page layout. Basically, APS offers all the features of XPress over the Internet.

It's designed to integrate with Quark Digital Media System (DMS), a built-to-order digital media and workflow management solution.

Combined, XPress 5.0, APS and DMS offer publishers the chance to acquire and lay-out assets remotely through the APS Server and a standard Web

browser. This works regardless of platform or location. Like DMS, APS is scalable, and is built by authorized providers to suit clients' varying needs.

"XPress and DMS form the foundation for powerful, dynamic publishing solutions," said Jürgen Kurz, Quark's director of product management.

The product will ship later this year, and run on Mac OS X Server and Windows NT4/2000 servers. **MW**  
Jonny Evans

application with the potential to revolutionize Web-page creation

It needs to work on a wide variety of platforms, operating systems and printers, as well as on different ages of computer. XPress 5.0 will be the first version not to support 680x0 Macs. There's many factors involved in building a stable application. One user's dream feature could mean expensive problems for another user."

Asked when XPress 5.0 is likely to ship, Kurz said: "We'll release it when our beta testers tell us it's ready."

He added: "We'd love to move into faster upgrade-cycles. Upgrade frequency will accelerate. Ideally, 5.5 will ship just weeks after 5.0. But I think in reality it's going to be a few months."

Quark remains tight-lipped on pricing and upgrade paths for both releases. Kurz said: "We're looking at upgrade strategies right now, from earlier versions up to 5.0 and 5.5X. We want to make it easy for a lot of customers to upgrade."

## Multiple undos

The native Mac OS X version of XPress 5.5, previewed at Macworld Expo in New York in July (see page 20), will support multiple undos — another major wish-list feature. Explaining why it's taken so long to implement this — and why it won't be available in XPress 5.0 — Kurz said: "XPress's memory requirements are low. Under the hood, XPress couldn't support multiple undos. It's a feature that needs extra memory."

XTensions was another problem, he explained. Quark has over 700 developers, offering over 1,300 XTensions. Developers can open XPress' source code, writing extra menus and software operations to add functionality to the application.

"Implementing multiple undos would also mean breaking our XTensions architecture. They'd stop working," Kurz said, adding: "OS X required a complete re-build of XPress and breaks the XTensions. We didn't want to break our developers' XTensions twice. We have to try to get our developers to migrate to OS X."

Discussing Quark's publishing strategy, Kurz said: "Network publishing means worldwide collaboration. We're looking at media-independent publishing. Many customers have invested in multiple-content strategies, but have set them up as separate business units. It costs more that way."

He added: "We want to provide a tool that lets publishers repurpose content to any available media



ILLUSTRATION: JAMES WALKER

as cost-effectively as possible. It's a flexible solution. Each publisher must separate content from design."

Kurz added: "Compare this to TV. The broadcast industry knew it had to adopt a standard, which it agreed on and maintained. Publishers didn't have that advantage. They moved from printing, to typesetting, to DTP and then the Internet. Publishing software providers need to separate content from design, so it can be syndicated in maybe 30 years."

## Content delivery

Kurz sees a future of personalized content, in which users specify the data they want, and how they want it. This, he says, will offer major licensing opportunities for publishers: "We want to provide opportunities for people to deliver this with the same level of quality."

Kurz also praised Mac OS X Server: "Apple will get back into the server market with OS X. We'll definitely be making an Active Publishing Server for X. When XPress 5.5 is available, everything will work on OS X Server."

Quark has a number of custom-built products to meet the needs of workgroups. Kurz said: "Many of our workgroup solutions can migrate easily to application service-providers. Print shops could host such services for their customers."

He added: "The beauty is: if you know Quark, you can publish to the Web — it's that simple." **MW**

## XPress 5.0: new features

- Layers
- Table-creation tool
- WYSIWYG Web-page creation
- Backward-compatible to 3.0
- Form controls
- Ability to save colour-calibration information
- Collection of fonts for output
- Saves TIFFs and EPSs as JPEGs and GIFs for Web
- Style Sheets for table cells



**Web tooling-up**  
XPress 5.0's Web-tool palette includes (from top): Rectangular Image; Form Box; Text Field; Rollover Button; Image Button; Pop-up Menu; List Box tools; Radio Buttons; and Check-box Tool.



## Refined palette

A QuarkXPress 5.0 Web document, showing the new Web Tools and Hyperlinks palettes, as well as the redesigned Document Layout and Colors palettes. Visual indicators are turned on.





# MS Office 10's OS X overhaul

**K**evin Browne, general manager of Microsoft's Macintosh Business Unit, met with *Macworld* during Macworld Expo New York 2001, offering a sneak peek at the forthcoming release of Office 10 for Mac OS X. Microsoft also announced MSN Messenger 2.0 for Mac, and an OS X 10.1 revision to its Windows Media Player.

Office 10 is a fully native (Carbonized) OS X productivity suite that features X's new Aqua interface, offers "complete support" for OS X's modern architecture, and provides several new feature enhancements – most noticeably Quartz-based alpha-channel transparency.

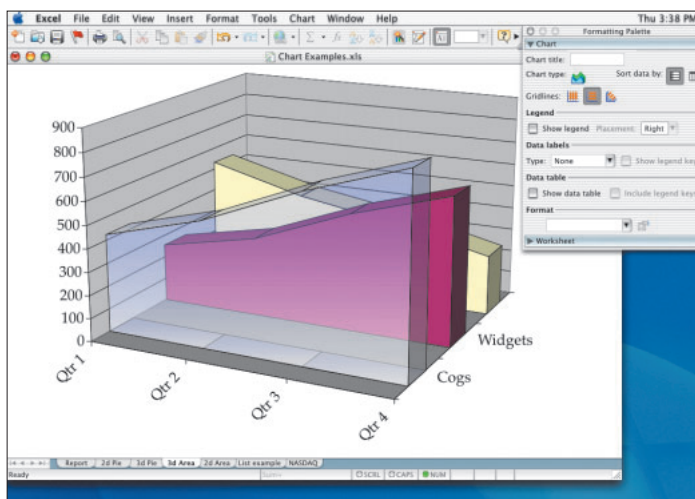
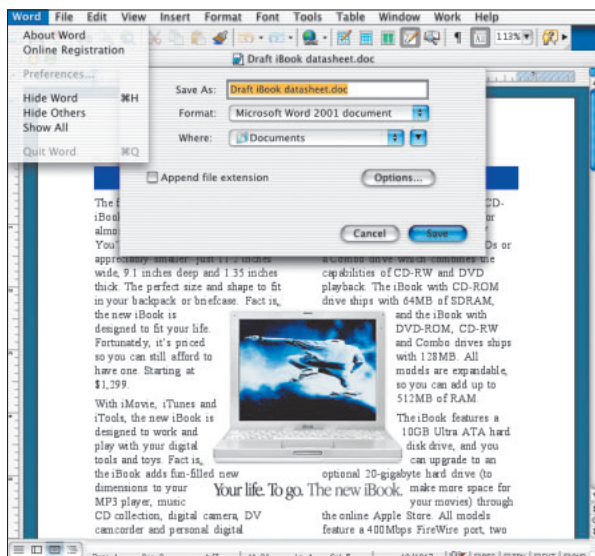
Running exclusively on OS X, Office 10 was hailed by Apple's Steve Jobs as "a poster-child for Mac OS X".

Office 10's Aqua interface makes functions and navigation features easier to find and use. Word, Excel, PowerPoint and Entourage have been given "a complete Aqua overhaul".

"We're delivering a brand-new experience for the Mac user," Browne told *Macworld*. "If OS X enables it, Office 10 delivers it," he added.

"By adopting Carbon and Aqua, and using Quartz to enhance the graphics capabilities throughout

**Word up** You can now command-click multiple selections throughout Word documents to apply formatting, spelling, searching or any other operation that wasn't previously applied. With the Clear Formatting feature, you can easily reset character and paragraph formatting, set the default text style, and restore hyperlinks throughout documents. Sheets (as shown below in Word) have replaced select dialogs in Office 10. The way sheets work eliminates the need to react immediately to a dialog, giving you greater flexibility.



**Excel** Office 10's Quartz-based alpha-channel transparency transforms Excel charts into great-looking graphics. A new AutoRecover feature lets you set specific time intervals to automatically save the spreadsheet being worked on. You can now also customize your keyboard in Excel.

Office 10, we've integrated system capabilities more deeply than ever," said Kenny Wolf, development manager for Office 10.

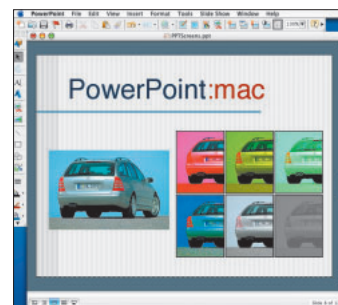
Components – such as toolbars and navigation buttons – have been redesigned for greater readability, and to help you quickly move from one feature to the next. Over 700 new icons have been added, using anti-aliased graphics for a cleaner appearance. Browne called the new interface, "elegant, bold and smooth". All Office 10 applications and supporting features provide Genie-style visual feedback, with menubars and the much-boosted Formatting Palette zipping in and out of position. Office's annoying Assistant, Max – the little Mac Plus with feet – seems to have been given the boot.

Aside from the Aqua and Quartz enhancements, Microsoft has added new features – such as multi-selection in Word, AutoRecover in Excel, and richer animation in PowerPoint.

Office 10 for Mac OS X will be available this autumn. Users who have purchased Office 2001 for Mac, or any individual Office 2001 program, can upgrade to Office 10 for the special upgrade price of £149.

## More MS stuff on way

Microsoft has also improved MSN Messenger 2.0 for Mac, which runs on both Mac OS 9.x and OS X, with new features such as Native OS X support, and an Aqua-fied and more intuitive user interface. Microsoft also



**Power packed** PowerPoint can collect for output, allowing you to transfer intact movies, sounds, and images to other computers and electronic media. The QuickTime Movies feature has also been improved to let you incorporate animation for richer video clips.

showed a version of its Windows Media Player for Mac OS X.

A full version of Internet Explorer 5.1 will soon be released for users of all Mac systems from OS 8.1 onwards – possibly the last version of the Web browser for pre-X systems.

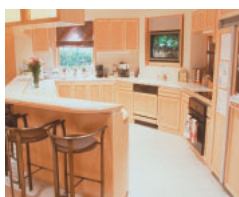
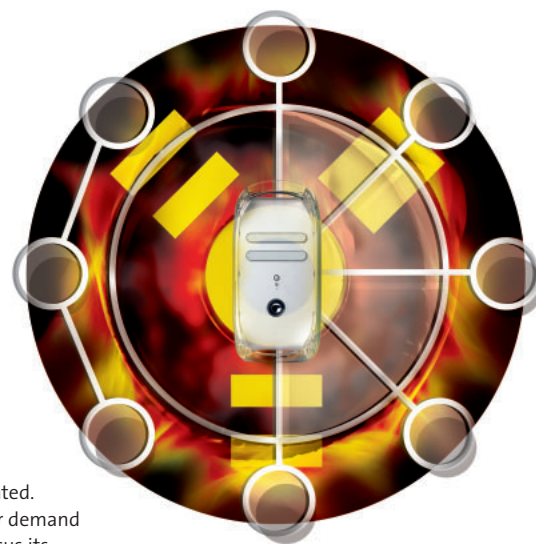
These products are examples of Microsoft's increased investment in Mac products. "We have a terrific relationship with Apple. We're as engaged as we've ever been."

"The deal we made with Apple in 1997 [which committed Microsoft to develop Office for the Mac for at least five years, brokered by Steve Jobs] runs out next August, but Microsoft never walks away from money. The Mac market is a large and important market for Microsoft," he reassured *Macworld* readers. **MW**





# Apple, Microsoft, Philips, Sony push 800Mbps FireWire



**Keep the home FireWire burning**  
Michael Toutonghi, VP of Microsoft's eHome division, showed how a Web browser could be used to control all the elements of an eHome, including lighting, music and even curtains. All command-traffic went through the PC via TCP/IP over 1394.

"Microsoft believes that the eventual home network will be made up of many different networks," said Toutonghi. These networks are made up of all of the different hardware protocols used in the home, from cable to wireless.

The different hardware and software protocols should be seamless. 1394's intelligence at translating between the PC and the device allows PCs to take on many of the processing burdens of managing this home network.

Intel might be busy pushing its 480Mbps USB 2.0 connection standard as an alternative to Apple's current 400Mbps FireWire high-speed link, but plans for FireWire's 800Mbps successor are nearing completion. Also good news for Apple and FireWire, is Microsoft's enthusiastic support, with the company hosting July's 1394 (FireWire) Trade Association Developer Conference.

Sponsored by Apple, Microsoft and Philips, the 1394 event saw presentations of products implementing new FireWire protocols, including many developed in recent months. Apple was a major exhibitor, showing the importance of the standard to its vision of a digital hub. Microsoft, meanwhile, extolled the virtues of its eHome vision.

Design presentations focused on the new 1394b specification – the next generation of FireWire. This has a bandwidth of 800Mbps with scalability to 3.2Gbps, as well as longer cable lengths and backward-compatibility with 1394. It's faster, more robust and capable, and is 1394's answer to USB 2.0.

One anonymous developer said: "1394b is a no-brainer for Apple. It's the natural evolution of the spec. The real question is whether or not a real

application can be created. Consumer or developer demand is what helps Apple focus its development."

Apple FireWire manager Eric Anderson gave a presentation on SBP-3 (Serial Bus Protocol 3), still under development. It will increase efficiency between FireWire devices, which in turn will reduce both bus traffic and the demand on CPU power, while increasing performance. This will permit true peer-to-peer device communication.

## Immediate data

SBP-3 means that it will become possible to connect a digital video-camera to a hard drive without a Mac. Anderson suggested that this set-up will be more efficient than transferring data through a CPU. It will save time when transferring analogue film-data to the Mac or PC for editing. The data on the hard drive is immediately ready for editing once plugged into a computer.

The conference is seen as an opportunity for developers to envisage new possibilities for the standard. One such topic was TCP/IP being transmitted over FireWire, letting FireWire devices network with computers without additional hardware. It also allows FireWire data

to be transferred over much larger networks, including the Internet.

Such technology could mean Macs with no Ethernet jacks, saving Apple money by allowing it to consolidate its hardware and simplify its motherboard design.

Major FireWire player Sony was also in the frame, announcing plans to ship HDTV (hard-disk television) equipped with iLink (Sony's brand name for FireWire). The company connected four PlayStation 2s using iLink to play a network game.

Microsoft has had FireWire support since Windows 98, and the level of FireWire support in the OS continues to grow. Microsoft used the conference to show the world its vision of the eHome.

Microsoft feels that FireWire's greatest strength is its ability to deliver the PC as a "free resource" to developers and consumers. For example, connecting a FireWire digital video camera can give users far more than just a place to download images. FireWire equipped devices can take advantage of a PC's keyboard and monitor to help control the device.

MW

David Read

## Radeon's VE day for ATI SmartShader

ATI has announced its next-generation graphics architecture – SmartShader – claiming that the solution "narrows the gap in visual quality between TV and computer screens", and that it "affords games developers the most advanced visual-effects on Macs or PCs".

SmartShader applies major advances in Pixel Shader technology – a series of small programs that run for every pixel rendered on a display device. Pixel Shader supports six textures on a single rendering-pass, making more memory and processor power available for faster frame-rates, or

more detailed 3D animations. The solution also improves support for Vertex Shaders, small programs that modify the shape and position of 3D objects – including animated characters.

ATI plans to ship the PCI Radeon VE Mac Edition card in the autumn. Equipped with DVI-I, S-Video and VGA interfaces users can connect a third-party digital flat-panel display, a conventional analogue monitor, and an S-Video source – such as a TV – to the Mac. All three interfaces can be used simultaneously, with two displaying independent graphics (the third acts as a mirror).



It's equipped with 32MB of double data rate (DDR) memory, and supports 32-bit resolutions of up to 1,920-x-1,440 pixels. It supports DVD playback on DVD Macs, and costs US\$129.

MW





# X delay sees Warcraft hole-up



## On this month's CD...

Aspyr's OS X-compatible demo of the Tomb Raider: Chronicles runs on both Mac OS 9 and OS X.

It introduces new moves, including tightrope walking, and a hand-to-hand stealth attack. Lara Croft

also sports

fresh costumes, including the fetching rubber outfit (above).

The demo features

a section of a single level, set among passages under a Roman coliseum with battles to fight, and puzzles to solve. The £35 title will be available in the UK at the end of the month from Softline.



The Carbonized version of Warcraft III: Reign of Chaos has been delayed until 2002 – even though the game received a public demonstration during Apple CEO Steve Jobs' keynote speech at Macworld Expo in New York.

Warcraft III is a 3D strategy game that is being Carbonized (optimized) for Mac OS X. Blizzard has sold over four million units of its Warcraft series for PCs. During the Expo display, Frank Pearce, co-founder and vice-president of Blizzard Entertainment, said the game was "primed for an autumn release".

He added: "We're excited about Mac OS X. Mac gamers are very important to us. This Carbonized version of Warcraft III is very fast. It's the first Blizzard game to use reality-3D graphics. It will feature plenty of carnage – this game is going to kick ass."

As Pearce left the stage, Jobs quipped: "Warcraft III – a simulation of the war between AOL/Time Warner and Microsoft this year."

Explaining the game's delayed shipping, Blizzard said in a statement on its Web site: "Our goal at Blizzard is to make the best games possible. We will not release a game until it's ready. We firmly believe that additional development time will prove invaluable, ensuring Warcraft III will expand upon the legendary game-play experience previously found in the series."



### Unprepared for battle

Blizzard Entertainment says Warcraft III's delay will make its performance on OS X "legendary".

"Our development team is finalizing the product. We look forward to bringing you an outstanding real-time strategy game in 2002."

### Dynamic dual

Warcraft III immerses players in a dynamic world, in which they complete quests and interact with computer characters. Players can rule five different races, and gain

experience, points and special items to help them battle monsters, explore towns and temples, and attack strongholds.

The game is also customizable. Tile sets, mission objectives, quests, attributes and spells can be tailored to taste. Players can meet online for free at Battle.net.

Warcraft III: Reign of Chaos is expected to cost £39.99. **MW**  
**Dominique Fidèle**

## For a totally Tropico taste...

Frustrated rulers will this month get a chance to hold the reins of power, as Tropico reaches Mac OS 9 and OS X. The Carbonized version of the game was exhibited at July's Macworld Expo New York.

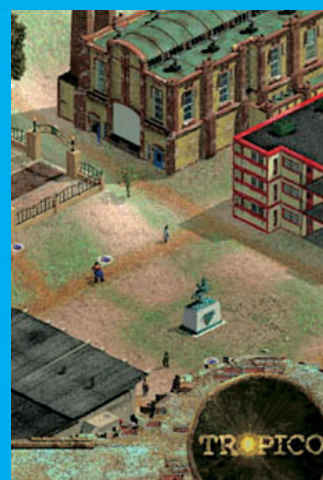
Players become the ruler of a remote Caribbean island. The aim of the game is to civilize a nation torn apart by civil war and poverty.

The ruler controls his or her people's fate, assisting them to overcome droughts and other natural disasters. They must resist rebellions, military coups and foreign invasions. Success is

rewarded with riches, while failure ends in the suspension of power.

The £39 Mac release features more scenarios than the current PC version. The Carbonized version features a total of 45 characters with 50 attributes each, as well as 80 buildings, which include sports arenas, cathedrals, airports, rum distilleries and cabaret bars.

The all-powerful leader can exercise political power through elections, as well as international trading. However, they must contend with uprisings and maintain political popularity. **MW**





# Apple profit in choppy waters



## Business briefs

■ After 17 years, UK-based Psion is quitting the handheld market to focus on digital-networking products. The decision reflects Psion's poor performance in a market saturated with handheld devices, the company said.

■ Corel returned a profitable second-quarter, with income of \$2.3 million on net revenues of \$36 million – an 11 per cent increase over the previous quarter. The company is to acquire Micrografix, which produces graphics solutions.

■ Palm (which reported a \$356.5 million loss for the current financial year, and will cut 25 per cent of its workforce) is to split its business in two – one focusing on hardware, the other managing the licensing and OS development.

■ Motorola announced better-than-expected Q2 earnings, but will axe 30,000 jobs. It saw a 19 per cent decline in second-quarter revenues, accruing \$7.5 billion. Semiconductor sales declined 38 per cent.

■ Iomega has announced a net loss of \$35.9 million for its second fiscal quarter.

Apple CEO Steve Jobs put paid to an old industry rumour during its analyst results post-mortem, telling them: "An Apple handheld? I'm not sure that's the most fun place to be right now."

On the night before Macworld Expo, Apple announced a net profit of \$61 million, or \$0.17 cents per share, for its third fiscal quarter 2001. Unit sales dropped across several product lines, but Apple said that this was to be expected in today's declining PC market. Pentium-maker Intel, for example, saw a 24 per cent drop in sales last quarter.

Apple's education position, meanwhile, is on the up – with analysts putting the company back at number-one.

Although healthy, the results fell short of analyst expectations; consensus estimates predicted \$1.6 billion revenues. Apple managed just \$1.475 billion revenues – a 19 per cent fall from the year-ago quarter. Gross margins fell slightly to 29.4 per cent, from 29.8 per cent in the same quarter last year.

Power Mac G4 sales declined 17 per cent since the second quarter, and 36 per cent from the third quarter a year ago. The company hopes to refresh pro desktop sales with its revamped Power Mac line-up (see page 70). Apple sold 355,000 Power Macs in the first quarter of 2000, 351,000 in Q2, and just 225,000 in its current quarter.

PowerBook sales fell 9 per cent compared to the quarter a year ago. iMac sales inched up from the previous quarter, but fell 36 per cent sequentially from the third-quarter 2000. On the bright side, demand for the company's consumer-portable iBook climbed 270 per cent from the second quarter – with Apple shipping 190,000 since launch.

### Solid profitability

"We're delivering solid profitability while maintaining lean channel-inventories in a weak economic environment," said Fred Anderson, Apple's chief financial officer. "Our balance sheet remains very strong, with over \$4.2 billion in cash, and we're targeting a slight sequential increase in revenues and earnings per share in the September quarter."

Apple shipped 827,000 Macs in the quarter. Online sales accounted for 40 per cent of channel sales.

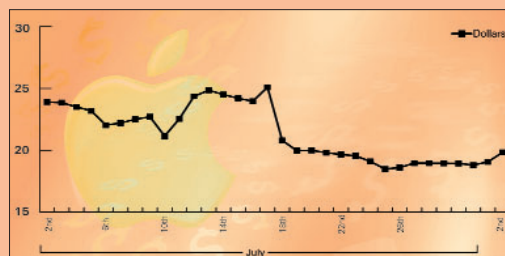
**Education boost** The company currently holds a 27.7 per cent market share for desktops and a 34.7 per cent share for portables in the US education sector, according to International Data Corporation (IDC).

Quality Education Data (QED) also released figures showing Apple seizing the top slot in the US education market once again, driving closest competitor, Dell into second place. QED's figures claim US public schools are equipped with up to 3,236,000 Apple systems. Dell's figure is half that, at 1,572,000 units.

"We've turned the corner in education, and believe we can begin to grow it again," Anderson said.

Jobs agreed: "Education is in our DNA at Apple. We have been the installed-base leader in K-12 education for nearly 25 years, and innovative products like our wirelessly networked new iBooks will keep us on top. We're in education because we give a damn," he affirmed.

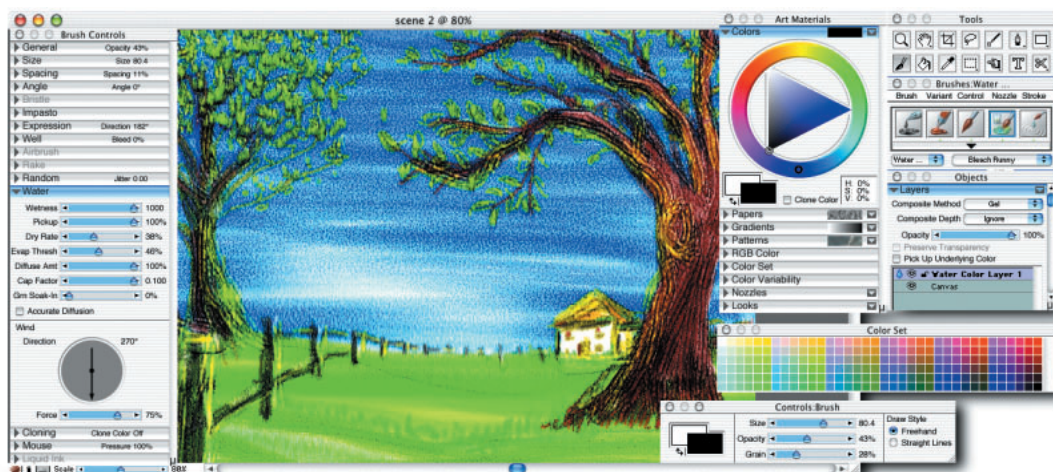
**Shops** Apple's first two retail stores have been successful, according to the company – which plans to open 23 more in 2001. Over 150,000 customers have visited the first two shops, delivering higher than





See 'Macworld' – inside 'Serious Software' – on this month's cover CD

# Product News



## Procreate goes Painter 7 X-mad

**C**orel is set to ship its second Carbonized creative-application for Macintosh, Painter 7. The company's creative software offerings are now collected together under the umbrella brand name, Procreate.

Painter 7, launched at Macworld Expo New York, is the latest incarnation of the company's natural-media illustration tool. It's a digital painting-application that simulates media such as watercolours, inks, oil paints, pencils and pastels. It offers texture controls, perspective grids and supports all standard export file-types.

It boasts a new watercolour technology, with advanced controls for simulating watercolour painting. Included tools will simulate brush wetness, paint dry- and evaporation-rates and paint flow-direction. It's also possible to assign a pick-up rate for brushes. It's been developed to perform like a digital paint box, so paints drip and blend together. A second new tool, Liquid Ink, mimics the viscosity, surface tension and behaviour of thick ink. Painter 7

offers improved colour-management tools, so it's capable of transferring colour information to other applications. Colour sets can be created from an image, and an active layer or active selection made with a single command.

The Colour Management engine has been improved, utilizing the same Kodak Colour Connection engine employed in the currently Windows-only CorelDraw 10. This feature has been well received by design professionals for its ease of use and accuracy. It's the first time that this engine has appeared in a Macintosh application. CorelDraw 10 for Mac is likely to ship in September. Painter 7 makes full use of the Aqua User Interface.

Painter 7, will ship in August and cost £225 – or £136 for upgrades. It also offers improved compatibility with Photoshop files, which can be opened and saved in .PSD format while keeping layers intact. It also offers RGB and CMYK options when saving .PSD.

**Corel, 0800 581 028**

### Layers of improvements

*Painter 7 features a variety of usability improvements. For instance, layer information can be saved in a document and transferred to other applications. It's also possible to preview images in the Save dialog box, including JPEGs and GIFs. The zoom facility is controllable through an on-screen slider.*

*Text now sits on its own layer – previously, each word created its own layer – making it difficult to position or edit. All text options are accessible through a single drop-down palette. Painter 7 also permits users to copy, cut or paste text from another application, and export text layers into shapes for editing in applications, such as Adobe Photoshop.*

**Macworld Expo**



## Pocket 48GB of storage

LaCie launched a 48GB PocketDrive at Macworld Expo. The drive features an improved FireWire-to-IDE bridge that boosts transfer performance to 35MB per second – twice the speed of FireWire discs, LaCie claims. 48GB suffices for over 20 hours of MPEG-2 video, or over 70 hours of CD-quality audio.

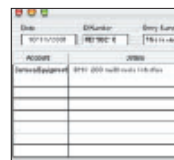
PocketDrives ship with built-in USB and FireWire connectivity. The drives also ship with a new feature – Fluid Dynamic Bearing motor technology – that cuts its noise by 20 per cent. The company also announced a \$299 PocketDVD-ROM drive at the Expo, offering speeds of up to 8x. Data transfer reaches rates of up to 10.8MB per second. UK pricing is unavailable for both products at press time. LaCie, 020 7872 8000

### Data drive

*The 48GB PocketDrive has improved data-transfer rates, and measures 27-x-87-x-143mm.*

### Bringing business to book

GuildSoft is shipping Torsoft CashBook Manager, its business cashbook solution. Features include customizable reports for cashbook balances and payment activity. It costs £34 with Invoicing & Purchasing and Contact Management modules are available for £16 each or £25 for the pair. GuildSoft, 01752 895 100.



### Vampire bloods X-file app

Vampire Software has released PcConverter (\$20) for Mac OS X. It offers a selection of tools designed to help cross-platform file exchange between Macintosh, Windows and Unix systems. It converts text files between many different formats and platforms, as well as processing custom database files.

Vampire Software, [www.vampiresoft.com](http://www.vampiresoft.com)



### Flashy USB storage

USB Innovation's Flash USB Drive is a tiny external-storage solution that's slightly larger than a chewing-gum packet. It holds up to 512MB of data, and costs £46 for the 16MB model. It fits any USB port using Flash memory to store data. Mac OS 9 compatible with a one-year warranty, it ships with a USB extension cable. It can be password protected, and has a write-protection switch. A bi-colour LED shows whether the drive is connected to the Mac. USB Innovations, 01494 794 974



### Audio visualized

DiamondSoft has updated Font Reserve Server to version 1.0.1. This client/server font-management system, which may fill the gap left by the disappearance of Adobe Type Manager, consolidates fonts into a network-accessible database. It automatically backs up the Font Reserve database. DiamondSoft offers a ten-user starter pack for \$1,399, and a 20-user starter pack for \$2,599. DiamondSoft, [www.fontreserve.com](http://www.fontreserve.com)

continues page 40



## Apple updates

Apple has released a clutch of updates in recent weeks.



Most notably, the IE version of **QuickTime 5.0**, which supports components downloads, new codecs and Cubic VR. **Mac OS X Server 10.0.4**, **Macintosh Manager 2.0.2** and **GeForce Graphics 2.1.1** have been updated. All three improve performance.

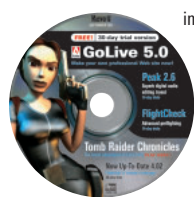
The **DVD Studio Pro 1.1** update improves detection and handling of unrendered Final Cut Pro sequences. It also broadens support for third-party external DVD-R drives.

Apple has updated **WebObjects 5.0 for Mac OS X Server 10.0.4** and **Mac OS X 10.0.4**. It recommends all users install this multi-country patch, which improves the support and handling of Java Archive Files. **Mac OS 9 Authoring Support plug-in version 1.1.2** adds compatibility for more third-party CD-RWs and mechanisms, including models from Que and Teac. Visit [www.macworld.co.uk/updates](http://www.macworld.co.uk/updates) for links to recent Apple updates.

## Third-party updates

### CubaseVST 50r1

This major update repairs a number of bugs and



improves compatibility. It can export MIDI events to Propellerhead's Reason.

### DoubleTalk 1.1

This adds Network Browser support, so Windows networks can be accessed using the Macintosh Network Browser. It also allows network volumes to be accessed by typing the server name or IP address of the chosen volume, and improves support for Windows PostScript printers.

### MacDraft 5.0.2

This is a maintenance update for Microspot's design application. It fixes a range of problems – most notably, where the application would crash in Mac OS 9.1 when a text object contained over 48 lines.



## Audible snaps

FujiFilm is launching the FinePix 50i multimedia digital-camera. Less than an inch wide, the £424, icamera offers a bright 1.5-inch LCD screen, autofocus lens and built-in MP3 support. It also offers a 2.47-megapixel Super CCD sensor with an output resolution of up to 4.3 million pixels.

The built-in MP3 player will display song titles on the screen of the unit's remote control. The camera is capable of capturing 80-second bursts of AVI (audio video interleaved) Motion JPEG action with audio. It also has a built-in voice recording and captioning function. A 12MB SmartMedia card ships with the product.

Another new feature, the camera cradle, lets the 50i be used as a webcam – and also recharges the units Lithium-Ion batteries.

FujiFilm, 020 7586 1477

## Next dimension

HP's PSC750 all-in-one printer includes a flatbed scanner designed to easily accommodate books and other 3D objects.



## Flat panel to replace dead CRT

NEC-Mitsubishi has launched a new 18-inch TFT display, the MultiSync LCD1830.

The £839 monitor offers a resolution of 1,280-x-1,024 dpi at 60Hz, has a contrast ratio of 300:1, and can display a palette of 16.77 million colours.

The company claims the LCD1830 has a screen-size equivalent to a 21-inch CRT monitor. It provides a six-colour axis control that individually adjusts basic printing colours, for an "exact" colour match between the monitor and printer.

NEC-Mitsubishi, 020 7202 6300



## Slim scanner stands up

Canon's slimline USB A4 scanner, the CanoScan N670U, and its S6300 printer are shipping. The 600-x-1,200-dpi scanner (£69) offers a colour depth 48-bits. It weighs 1.5kg (3.3lbs), and its dimensions are 256-x-383-x-34mm (10.24-x-15.32-x-1.36 inches).

It offers three single touch buttons for scanning, copying and faxing, and the device's cover is designed to accommodate thick items – such as books. The unit has a detachable stand that will tilt through 90 degrees to save space. The device also offers vertical scanning.

The scanner uses two new image-enhancement technologies. Qare (Quality Automatic Retouching and Enhancing) removes dust and scratches from the scanned image. Canon's second technology adjusts the scanner's tone and gamma settings. The software bundle includes ArcSoft's PhotoStudio 2000 photo-editing suite and ArcSoft Photobase image-archiving solution.

The S6300 printer offers up to 17 A4 ppm in mono, and up to 12 ppm in colour. The inkjet printer offers a resolution of 2,400-x-1,200 dpi, and utilizes Canon's MicroFine Droplet Technology to improve printed details and tones. It uses four single-colour (CMYK) ink tanks, each of which can be independently replaced.

The £322 printer ships with a one-year warranty and can support paper sizes up to A3+. The printer's dimensions are 573-x-335-x-194mm (22.9-x-13.4-x-7.8 inches) and it weighs 7kg (15.4lbs).

Canon, 0121 680 8062

## HP printer does it all

Hewlett-Packard has launched an all-in-one printer, scanner and copier – the PSC750. The device prints at speeds of 11ppm (pages per minute) in black and 8.5ppm colour. It uses HP's PhotoRet III technology to produce high-quality photographic prints and clear text, the company claims. It can print on a variety of media, including t-shirts and speciality card.

Encased in a metallic blue-and-grey plastic, the PSC750 has a flatbed design that both copies and scans. Copying speeds are 11ppm black and 8ppm colour. Up to 99 copies can be made from an original at one time.

An integrated copy button navigates through functions such as cloning, reductions and enlargements. The PSC750 has an optical scan-resolution of 600-x-1,200 dpi. The all-in-one ships with image-editing and OCR (optical character recognition) software to modify documents. Available now, the PSC750 costs £199.

Hewlett-Packard, 08705 474 747



## Ricoh's gate to megapixel pics

Ricoh has announced the Caplio RR10 2.1-megapixel combined digital camera and MP3 player. The unit offers 2x optical-zoom plus 2x digital-zoom, and comes equipped with a docking station – called Ricoh Base. The USB dock offers single-click transfer of images to a Mac, and also doubles as a battery charger.

The Base is controlled by Ricoh Gate software, which converts images into preset formats and sizes, stores information to selected folders and assigns file names. The software can download MP3 files to the camera; it also lets users create email file attachments. The unit has a microphone for capturing memos.

The camera will take images from as close as 4cm for detailed snapping. It also supports resolutions up to 1,600-x-1,200 pixels, and offers selectable ISO sensitivity settings. White balance controls are included, as is a sequential shooting mode to capture moving objects.

The Caplio RR10 can create short movies in Motion Picture mode, which

records and plays back AVI movie clips at 320-x-240dpi. It will capture up to six minutes of video on a 64MB SD card. The camera also has a built-in document mode, for photographing printed text. Images can be annotated with a 10-second voice stamp. When placed in the Base, the camera will behave like a low-resolution webcam.

The RR10 is compatible with SD memory cards. It supports a number of image formats, including TIFF and JPEG, and both PAL and NTSC video specifications. Images can also be viewed directly on TV using an AV cable.

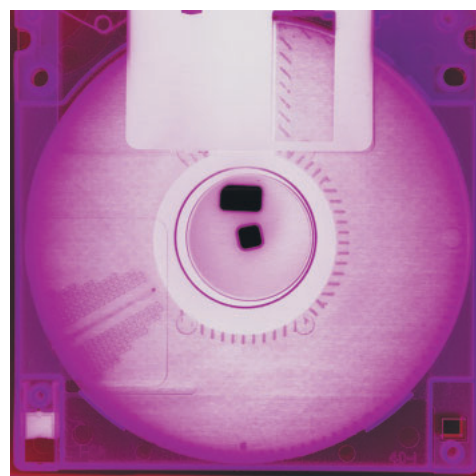
The unit houses a 1.5-inch TFT monitor display, as well as video out and audio out USB interfaces. Its dimensions are 116.8-x-29.5-x-53.8mm (4.6-x-1.2-x-2.1-inches). It weighs 172g, (6 ounces). No UK price is available yet.

Johnson's Photopia, 01782 753 372



### Free base

The Ricoh Caplio RR10 comes with Ricoh Base, which allows images and audio to be downloaded to a Mac via USB.



## The collection with no name

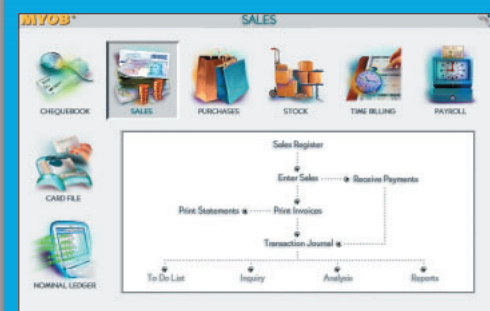
Untitled, developed by design consultants Artificial Environments, is a digital-image library of experimental photographic images. It consists of a selection of contemporary photos assembled by the Untitled organization, a collective of experimental image-makers. The library is searchable online ([www.ae-pro.com](http://www.ae-pro.com)), and each image is categorized using several different keywords chosen to reflect an image's composition, style and mood. Licence costs vary depending on use.

Untitled, 01474 815 004

## Account for yourself

MYOB UK has released new versions of its accounting software. MYOB (Mind Your Own Business) 10, which costs £195, and the £295 MYOB 10 Accounting Plus, both offer "Command Centre" and "Card File" features. The former holds over 80 reports, including nominal ledger, sales, purchase, cheque book, invoicing and credit-control information. The Card File is an integrated database of customer details.

MYOB Accounting Plus offers additional features, including multiple currencies, time billing, and advanced stock control systems. Both packages will export data to Microsoft Excel, Word or WordPerfect. MYOB UK offers a fully functional demo of both versions, but use is restricted. MYOB UK, 01344 397 222



## Ahead of the pac

E-pac has released the L300, a slimline carrying-case for the PowerBook G4. It has a lightweight metal frame for durability, offers a double-wallet storage system for accessories, and has a dedicated Power Pac pocket. The outer shell is made from durable ballistic Nylon. A leather version is also available. It weighs 1.7kg (3.74lbs), and costs £47; the leather version weighs 2.2kg (4.84lbs), and costs £64. Mac Accessory Centre, 0191 296 1500



## Photoshop effects

Sapphire Innovations has released a fresh collection of Photoshop 6 plug-ins – Sapphire Styles volume 2. The collection consists of 1,200 styles for Photoshop 6 and Photoshop Elements, and offers gradients, contours and metallic effects. It also contains frame effects. A demo is available for download. The full collection costs £19.99. Sapphire Innovations, [www.sapphire-innovations.com](http://www.sapphire-innovations.com)



## Projection at Sharp end

Sharp's portable LCD projector, the PG-C20XE, weighs 2.6kg (5.72lbs), and measures 260-x-74-x-207mm.

It has a brightness of 1,000 ANSI Lumens, and accepts a variety of video input signals – such as RGB and S-Video. It has a resolution of 1,280 dots by 1,024 lines in SXGA format, and costs £3,234. Sharp, 0800 262 958



## Broadcast media

Panic has released Audion 2.5, its digital-audio player software for the Macintosh. It will play and record digital-audio files, including streaming broadcasts. It can edit and mix, and supports external MP3 players. Mac OS 8.1 through 9.x and Mac OS X versions are available. The player edition costs £19.95, while the encoder version costs \$32.95. Audion, [www.panic.com/audion/](http://www.panic.com/audion/)



## CDs & books

**Revealed: Photoshop**  
Photoshop Studio Secrets from Hungry Minds is in its third edition. The £39.99 title has been updated for Photoshop 6.0. Inside, 21 artists discuss how they use the application.



Topics include building 3D characters and special effects. A CD of artwork samples is included. Photoshop Studio Secrets is

available at up to 35 per cent off from Macworld's Reader Offers. ([www.macworld.co.uk/readeroffers](http://www.macworld.co.uk/readeroffers)).

Macworld, 020 7831 9252

## Dino game targets kids

Knowledge Adventure has announced two games based on Jurassic Park III – Dino Defender and Danger Zone. Both 3D action-adventure games for seven year olds feature dinosaurs from the film. Dino Defender centres on an emergency task team, deployed to capture escaped dinosaurs. Danger Zone puts players in a virtual obstacle course to collect dinosaur DNA and clone it. Both titles cost £19.99 each. Knowledge Adventure, 0118 920 9100

## Curriculum boon

Softase's £29 Textease National Curriculum Packs for Keystages 1 and 2 cover a range of topics including, Fractions, Percentages and Ratios, Life Processes and Living Things, and Developing Literacy. Teachers' notes, detailed summary exercises and activity sheets are included. Softase, 01335 343 421.



## Lighting the way

LightWave 6.5 Magic is a how-to guide for dozens of effects created with Newtek's 3D application. Techniques include building realistic hair. A CD of all the project files comes with the title, which costs £34.99. Pearson Education, 020 7447 2000



## Epson looks at printer details

Epson has launched the Stylus C40UX, a four-colour inkjet printer. The £67 printer offers a 1,440-x-720 dpi resolution for black and colour printing. Epson's Variable Sized Droplet Technology, ensures fine-detailed prints, according to the company.

The C40UX has a print speed of up to eight pages-per-minute (ppm) in monochrome and 3.9ppm in colour. It also features USB connectivity, advanced driver functionality – including PhotoEnhance 4 for automatic image optimization – a retractable paper tray, and power and cancel buttons.

The printer ships with a black cartridge that would normally retail for £9, and a colour cartridge that would cost £13. The printer has a one-year on-site warranty, which can be extended to three years at a cost of £41.

Epson, 0800 200 546

# SoHo printer is X-rated

Lexmark is shipping two all-in-one inkjet printing, copying and scanning devices – the X83 and X73. The devices, which are aimed at the SoHo (Small office Home office) market, have the same print resolution – 2,400-x-1,200 dpi – and their built-in flatbed scanners offer resolutions of 600-x-1,200dpi, and a colour depth of 48bits.

The all-in-ones will produce up to 99 copies per run in Copying mode, and documents can be reduced and enlarged.

The X83 prints at speeds of 12 pages per minute (ppm) in black, and 6ppm in colour. This model also doubles as a standalone colour copier, producing 10 copies per minute (cpm) in black, and up to 3cpm in colour. The X73 prints at 9ppm in black, and 5ppm in colour.

Each print cartridge will supply 600 pages at five per cent coverage in black-&-white, or 275 pages at fifteen per cent



coverage, Lexmark claims. The maximum duty cycle is 36,000 pages.

Both ship with Optical Character Recognition software to convert scanned documents into text. The printers support a variety of paper thicknesses, up to weights of 270gsm. Mac OS 8.6 or later, including OS X, is supported. The X83 costs £170, while the X73 costs £144.

Lexmark, 0870 444 0044

# Projector is a natural

Mitsubishi has released the S290U SVGA (Super Video Graphics Array) projector. This 1,600 ANSI lumens projector offers a resolution of 800-x-600 dpi, and uses Natural Colour Matrix technology to reproduce colours.

It projects at ranges between 40 to 300 inches with a zoom ratio of 1.3:1 and contrast ratio of 400:1. Its dimensions are 295-x-122-x-350mm (11.6-x-4.8-x-13.7-inches), and it weighs 5.9kg (13lbs).

The £3,200 projector's Point 'n Zoom will magnify any area of the image. The product offers digital keystone correction of up to 15 degrees.

The projector's Picture-in-picture (PiP) feature allows two moving images from different sources to be shown simultaneously on the same screen. Digital Zoom expands the image to full screen size while keeping the image as a PiP. Parts of an image can be pinpointed by remote control. Compatible video inputs include S-VHS, PAL, NTSC and SECAM.

Mitsubishi, 01707 278 684



## Storage boost

LaCie's 24x-10x-40x CD-RW can read 700MB discs, which are able to store six minutes more audio than older 650MB CDs.



# Burn-proof FireWire writer

LaCie has announced its 24x-10x-40x CD-RW. It will burn a 650MB CD in under three minutes, and rewrite CD-RW discs at 1.5MBps. LaCie's

drive includes Burn-Proof technology, which eliminates buffer under-runs, LaCie

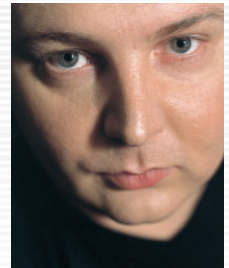
claims. The company guarantees 24x burning when used with older Macs. Burn-Proof technology also allows background burning.

The 400Mbps FireWire drive can be daisy-chained with other devices. A SCSI-3 version will be available shortly. The drive costs £249.

LaCie, 020 7872 8000



The time's almost right for Mac fans to make the leap en masse to OS X.



## Ten timetable

Since last September, when the Mac OS X Public Beta became available, the Mac community has been waiting for the right moment to make the switch to Apple's next-generation operating system. Most of the early adopters took the leap when it was officially released on March 24. As a matter of honour, as much as a professional requirement, I made the transition a week earlier than this. Don't even ask what version I'm using now. Also, now that all new Macs sold ship with OS X as well as OS 9.1 (or 9.2 for new Power Macs) in the box, the ranks of OS X users will continue to grow ever larger.

But the crucial thing is, when should the rest of you follow us brave souls? Although the decision will depend on what you do – if you depend on QuarkXPress, expect a long wait – the time is fast approaching when I'll give the signal to go over the top and into X-Land. A year from now, anybody not using OS X could be left in limbo until they upgrade their apps to OS X. The harsh truth is that OS 9.x software isn't going to keep getting updated forever. There'll come a time when it's left standing still.

Many may feel this is unfair, especially those working on pre-G3 machines who are unable to use OS X. Well, maybe now is an excellent time to retire your Quadra and buy a G4, iBook or iMac.

Following Macworld Expo New York, OS X has become OS X 10.1, although only for Apple-presentation purposes at present. This will be faster and more stable, as well as offering more-compatible computing. More importantly, it'll fix the main bugbears that trouble developers: better support for external third-party peripherals, such as drives and cameras. This will enable companies, such as Dantz, to support the multitude of backup devices that it needs for Retrospect to work properly.

Two months ago, Dantz's developers were fuming, because the APIs from which to control devices from OS X simply didn't exist. Apple had promised support, but none was forthcoming. However, Apple has since re-evaluated the importance of backup, as it recently released OS X Server. Now, Dantz is overrun with Apple techies fixing bugs and writing the APIs that it so desperately needed.

There are plenty more developers experiencing problems that are hindering their development plans. Hermstedt allegedly sent a baseball bat to the publishers of CodeWarrior, with a polite note requesting they beat themselves senseless. Apparently, Hermstedt's development team is plagued with problems because CodeWarrior keeps crashing in OS X. If this is a problem for Hermstedt, you can be sure other developers are having similar headaches.

Much fuss was made recently over the absence of Adobe from Macworld Expo in New York. The reason, though, is pretty simple: with nothing new to announce, there's little point in spending valuable time and money just to give people bad news. Why take developers and product designers from their work to be harassed by an X-hungry public on a show stand, when they could be authoring the products that the same people want so desperately.

So while you wait to take the big leap, spare a thought for the developers that are working so hard to get you the products you want. It's just as frustrating for them as it is for you not to have products ready.

It seems everybody is waiting for an avalanche of software products before making the leap to OS X. But it's not just OS X software that's waiting in the wings. Despite every insider "knowing" about a flat-panel iMac (this writer included), there was no sign of it in the New York keynote address.

One theory is that the US recession, which is now hitting hard, has made the US IT market so soft that, at present, nobody's buying computers. Apple could be forgiven for wondering what the point is of introducing an exciting new computer when nobody's buying. The signs now point to either a small announcement in Paris at the end of September, or at January's Macworld Expo in San Francisco, where there could be a raft of new models.

Although things seem quiet right now, I predict that between September and January they'll be an explosion of OS X goodies. January should see most of your current software running in X, including the big one – Adobe Photoshop. Also, the main Macromedia titles should be finished by then. Microsoft Office for X is expected very soon, and has been publicly demoed, but QuarkXPress – though shown in beta form at Macworld Expo – is unlikely to make it for January. Version 5 of XPress was first "announced" two years ago, so any prediction from Quark on shipping dates should be taken with a fistful of salt.

Smaller applications and utilities are already well under way. An OS X version of Palm Desktop connection software was showed at Expo, and there's a steady stream of disk utilities, and other life-enhancing gadgets for X.

So, roll up your sleeves and get ready to mobilize your upgrades. X-Day is approaching. Make sure you don't get left behind. As Ken Keysey's Merry Pranksters used to say: "You're either on the bus, or off the bus". If you choose at this point to step off, you may never catch up. So stay on, and enjoy the ride. Oh, and would the last person to leave OS 9, please turn off AppleTalk.

**'One company sent a baseball bat to the publishers of CodeWarrior, with a note requesting they beat themselves senseless.'**

MW



**L**ike it or not, there are questions that must be asked. The cowboys are working overtime and I still don't understand last week's news. So you tell me: is Tony Blair right about those nasty anti-globalization protesters flogging a "spurious" cause? Is the new Dyson twin-tub washing machine just an iMac you can chuck your dirty clothes in? Was George Dubya the homely inbred kid that played banjo in the film *Deliverance*? Could Buffy really benefit from a stakeholder pension? And why is an 867MHz G4 58 per cent faster than a 1.7GHz Pentium 4?

Let's do the easy one first. According to John Rubenstein, Apple's vice president of hardware, the answer is due to the so-called Megahertz Myth. During Apple CEO Steve Jobs' keynote at the recent Macworld Expo in New York, Rubenstein was invited to shatter a delusion perpetuated by Microsoft, Intel and most computer retail outlets: that MHz equals performance. This is an unshakeable belief right up there with: "More police is good.," "The Web is cool.," and "Cars in the UK cost more because they're right-hand drive."

Although in reality MHz is only a contributing factor towards real performance, somewhere in the average Homer Simpson mind it has managed to deliver a megahurt in the on-going cycle of Mac misinformation.

To compare chips meaningfully, you need to examine their architecture as well as their MHz. This means looking at the production process, size, and the number of “pipeline” stages in a processor. Most people assume that, because a Pentium 4 runs at 1.7GHz, it must be faster than the 867MHz G4. Bigger number, faster speed. Physically, the G4 is half the size of the hot, fat and sweaty Pentium. The Pentium also runs through 20 pipeline stages, compared to the G4’s seven. And that’s where the discrepancy appears.

Think of it like this: data needs to get fetched, decoded, executed and stored. Processors do this by pouring this stuff down something that resembles a microscopic soda straw. The result is that, although the Pentium clocks-up 1.7GHz because it's got 20 pipeline stages, it actually takes longer to move the data through all these than it does through the seven in the compact and bijou G4. Rubenstein had some cute graphics to illustrate portions of Pringle crisps-like bits of data pumping along these different-sized pipes. And that, boys and girls, is why – despite the MHz gap – the G4 is 58 per cent faster than the Pentium 4.

You can bet that if there was a big enough media campaign to explain this to the world in words of few syllables, Intel would be losing a lot more than 76 per

These days, it's not just the ecology of the planet that's at risk; the whole ecology of cyberspace is also in danger. If I was cynical, which I am, I might draw a parallel between the recent court reversal on Microsoft's monopoly decision with the reversal of the US agreement to the Kyoto measures to curb pollution by industrial gases. Both threaten the ecology of the planet – one in the physical space, and the other in the information space. While the danger to the physical world is being ignored elsewhere, the danger to the information space from a global monoculture could be just as catastrophic. And in a shorter time span.

Microsoft does what any private corporation should do – be successful and reward its shareholders. But exceptional success brings power and, if unchecked, it can upset the ecology of commerce. Anyone with half a brain understands this, and that's why it was at the core of the antitrust measures against Microsoft. But beyond the ecosystem of the IT industry, it's the safety of all the systems that handle the commerce and information flows of the world that could be at risk. Because of the pervasive role of information and its reliance on IT, it's the very functioning of industrial society and, by way of consequence, national safety that is ultimately a stake. The risk is greater when the major vendors, including Microsoft, but not exclusively so, have the ambition to provide the means (software) as well as all the services in the new world-order.

US-based information-security expert Paul Strassmann talks about the risk of a 'monoculture' entirely based on one variety of operating system (Windows), Office applications (Microsoft Office) and Web services (.Net). Any uncontrollable virus, irresponsible hooligan, or fanatical enemy of the industrial nations can bring a global meltdown of the information systems, by exploiting a single flaw in these systems. Hmmm...

Superficially, all major IT vendors, including Microsoft, IBM, Sun, and Hewlett-Packard, are co-operating on vendor-independent standards. But deep down, the ambition of each player to dominate this new world is still all too real.

Homer Simpson said: "It's because they're stupid. That's why everyone does everything." So perhaps the key question that needs asking is: "Do we believe what they tell us?" Or, as with the MHz Myth, are there an increasing number of dangerous, consensual hallucinations out there that need elucidating and exposing?

**‘These days, it’s not just the ecology of the planet that’s at risk; the whole ecology of cyberspace is also in danger.’**



## Macworld Rating

★★★★/9.0-10.0 = OUTSTANDING

★★★★/7.0-8.9 = VERY GOOD

★★★/5.0-6.9 = GOOD

★★/3.0-4.9 = FLAWED

★/0-2.9 = UNACCEPTABLE



## Painter 7

**Publisher:** Procreate, formerly Corel, [www.corel.co.uk](http://www.corel.co.uk) (0800 581 028)

**Pros:** Luscious paint effects; new ink and watercolour tools.

**Cons:** Some effects are sluggish.

**Minimum specs:** Mac OS 8.6-X; 128MB RAM for X, 64MB for OS 8; G3.

**Price:** £255 excluding VAT; upgrade from previous version, £136.

**Star Rating:** ★★★★★/8.4

**P**ainter has been around for many years, and it remains in a class of its own for natural-media – pastels, airbrushes, inks and watercolours – graphics tools. Programs such as Adobe Photoshop are great for fixing photographs and creating original art, but if you want to paint on a Mac, Painter is *the* only choice.

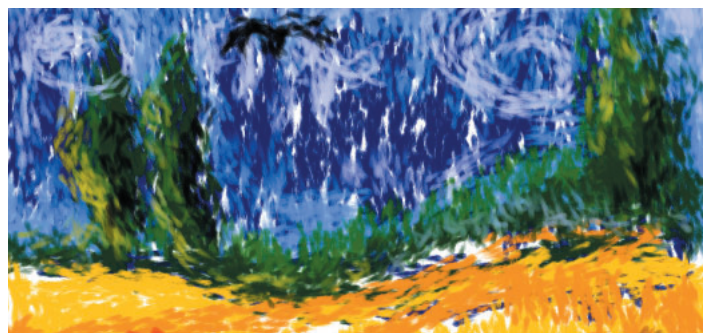
The first time I looked at Painter, I stupidly installed it on my LC 475. Predictably, it was like painting with glue – the speed requirements of Painter far outstripped the LC's capabilities.

So almost ten years later, I have Painter 7 installed on a 500MHz Power Mac G4 running Mac OS X. The first thing I tried was slow. As the cursor swept across the screen, the paint lagged behind – chasing the cursor around the screen, but not catching it until it stopped. Although my heart sank, it turns out it's only the case with some of the newer, more heavy-duty paint effects. The older, simpler effects – such as airbrush and regular paint brushes – are as nimble as you like, but the new water colour features do stretch the capabilities of the processor.

### Water rate

Despite this, the watercolour feature is one of the most interesting additions to the application. The old watercolour feature was good, but now you can adjust every aspect of the brush – from the rate of evaporation, to wind direction. The results are impressive – as accurate a depiction as you could hope to see. The only drawback is the delay between making the brush stroke and seeing the results. This is particularly difficult for making quick strokes – as in a pale colour wash for a sky, for example.

Other aspects of the watercolour settings include wetness and dry rate,



### Post impressions

One feature in Painter 7 that will please many users is the improved compatibility with Photoshop – for instance, saving a Painter file as a .psd (Photoshop document) keeps the Painter layers intact.

allowing the artist to blend colours while still wet, or wait for them to dry. In a similar vein, there is a new liquid-ink media tool. This lets you use ink with variable viscosity and surface tension, which will actually congeal and bind with other colour inks.

As a Carbon application, it runs well in OS X – but it's also compatible with OSs back to 8.6.

Sliders are widely used, both to view and preview images. The slider will, for example, do a continuous zoom in single percentage increments – which allows you to zoom in on exactly the part of the image you want to work with. In the save options, the JPEG and GIF encoding can be viewed in real time. This means that you can move the slider to adjust the amount of compression, while watching the image to see how the compression affects its quality.

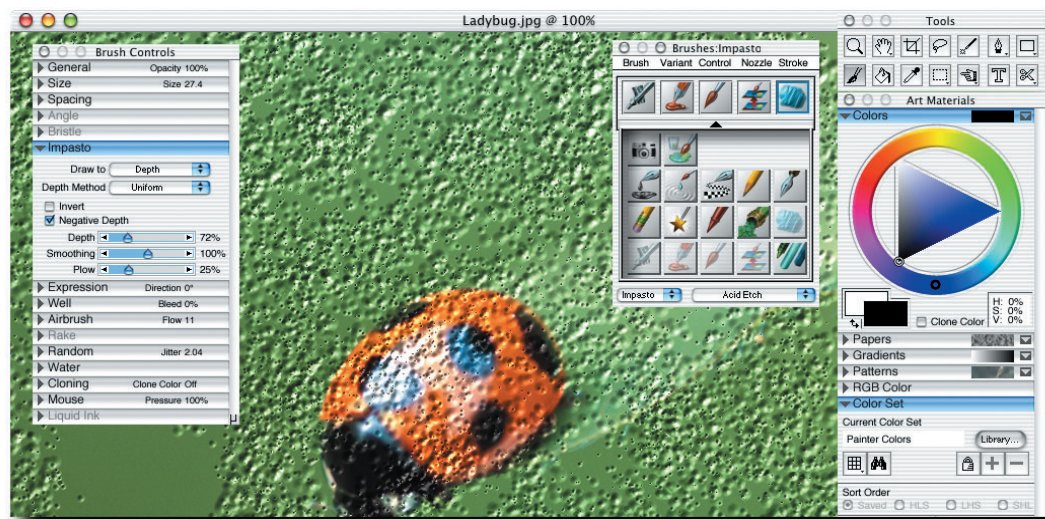
Painter's text capabilities have also been improved, and now combine the Text Tool and the Dynamic Text plug-in from previous versions into one simple and powerful tool. All the controls are now in a single drop-down palette.

Perspective, as we were all taught in art class, can be drawn using a vanishing point to give the impression of distance thought the miracle of depth perception and faking of juxtaposition. Or something like that. Anyway, Painter now lets you overlay perspective grids so you can paint railway lines and straight streets easily and without fear of confusion.

### Macworld's buying advice

If you already use Painter, version 7 is a must-have – if only for its OS X compatibility. It has some cool new features, but the watercolour functions are still slow. Even entry-level iMacs have full video-editing power, so why does pretending that some pixels are watercolour paint require so much processing power? You really need a graphics tablet to get the best out of Painter, as it makes use of the pressure-sensitive tablets like no other application. Sadly, Wacom, the maker of the most common tablets, hasn't released Mac OS X drivers yet.

David Fanning



### Unpalatable

There are plenty of interface enhancements in Painter 7, but the screen is still littered with palettes and menus. Using Painter on a 1,024-x-768-pixel screen leaves very little space for artistry. You really need a big monitor. Unfortunately the amount of options offered for paper, brush, media and other factors, make it difficult to leave the screen uncluttered. Perhaps a Kai Krause-style drawer system would be better, because 90 per cent of the tools don't need to be a single click away.



## Mac OS X Server

**Publisher:** Apple (0800 783 4846) [www.apple.com/uk](http://www.apple.com/uk)

**Pros:** Extremely powerful and stable; cheap; easy to use.

**Cons:** Without full support from third-party applications, such as Dantz Retrospect, it's not yet ready for primetime.

**Min specs:** G4 or G3; 128MB RAM.

**Price:** Ten-user licence, £339; unlimited-user licence, £680 (both prices exclude VAT).

**Star Rating:** ★★★★★/8.1

**A**pple has never really been big in the server business – even big Mac-based studios often use Windows or Unix servers. Mac OS X Server was around for a while before the OS X client, but it didn't have its glossy interface or ease of use – it was basically a Mac-friendly version of a Unix server. Now, OS X Server has been updated, offering what Apple calls “industrial-strength ruggedness with a simple-to-use interface” – at least simple if you're used to other server software.

Unlike the client version of OS X, the server-software installation doesn't include the Classic environment. This means you won't be able to run applications designed for OS 9 or earlier. If upgrading a server, make sure that server applications – such as OPI or RIP software – will run natively in OS X. More importantly, make sure any backup software can run natively in OS X.

### Backup dearth

Currently, Retrospect, the leading backup software from Dantz, is available as a public beta. This is good news, but only a brave or foolhardy IS (Information Systems) Manager would run beta software on a mission-critical server. And, only a brave or foolhardy IS Manager would run a mission-critical server with no backup facility. This leaves OS X Server high and dry.

Installation is as easy as server software gets – you're simply guided through choices. You'll need to know what you want at this point, so even though the choices are well presented, a little technical knowledge is needed. If searching for a manual, you'll be disappointed. There's no printed manual included, just a PDF. A printed book is available, but only online from Fatbrain ([www.fatbrain.com](http://www.fatbrain.com), \$36.50 plus p&p). I know this will save a tree or two, as it's a big



manual; but personally, I like to have an easily accessible reference, especially when installing such potentially complex software.

Once you've navigated the set-up process, you're unlikely to need to touch the server for some time. The beauty of OS X is its stability – it doesn't crash, and in the unlikely event that an application does crash in OS X Server, it will fix itself. The server keeps an eye on any application that's running, and if something goes wrong it will restart the app. If the whole system freezes, which is even more unlikely, the machine reboots and starts up the applications that were running.

### Best Mac

So why would you choose a Mac server when there are other servers that do similar jobs? First off, even when working in a Mac-centric environment like a design studio, it's unlikely that there'll be no PCs on the network. OS X server means that Macs and PCs can share files and printers out of the box. That also goes for Unix machines, Linux machines and just about any kind of computer available. This may not seem like a big deal, but setting up Mac services on a PC server can be a nightmare – especially if you come from a Mac background. Equally, IT staff from a PC background may be unfamiliar with Mac networking – they get confused by its simplicity.

For those wanting to serve Web pages from a Mac, Apache is included. Apache is the world's most popular Web server, and it's free. You may be forgiven for thinking that it's popular because it's free, but in fact it's popular because it's a rock-solid Web server. Apache is high quality largely because it's an open-source project, meaning that thousands of developers have collaborated to produce it. So any bugs found are fixed in days, rather than months.

There's also an option to install QuickTime Streaming Server and Web Objects 5 deployment software. The QuickTime server allows you run movies on a Web site, create a Web radio station, or even show live video or audio.

The Web Objects software is simply to deploy Web Objects projects. To create the Web Objects content, you still need to buy the full software. Fortunately, at a little under £500, it's now a fraction of the price it used to be.

### Macworld's buying advice

I expect all professionals working with Macs to be running OS X within a year. It makes sense to use an OS X-based server – it's cheap, simple to use and offers excellent features for administrators.

The hardware requirements are also cheap compared to the non-Mac options. However, there are issues with compatibility – not with other operating systems, but with software for OS X. In a couple of months, it'll be worthwhile, but for now, it's only worth buying if you need some practice setting it up.

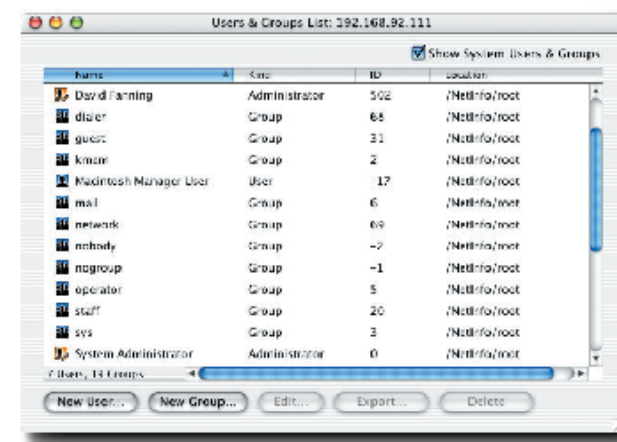
David Fanning

### Simple server

One of the main reasons for having a server is to administer users from a central location. OS X server offers extremely simple-to-use workgroup administration. It also allows remote administration, so you can tweak the server from any workstation. The workgroup administration runs around Directory services, which is how OS X server keeps tabs on which machines or users have which privileges.

### Users and groups

Authentication and permissions are set in the Users and Groups panel. This picture shows many of the preset users that are part of Mac OS X, adding more users is simply a matter of clicking the New User button.





Mini DV-camcorder

## JVC GR-DVP3E

Manufacturer: JVC  
(020 8896 6000)  
www.jvc.co.uk

**Pros:** Tiny; feature-packed.  
**Cons:** Tape jams; no FireWire cable.  
**Min specs:** G3; Mac OS 8.5.1; USB.  
**Price:** £1,200 (including VAT)  
**Star Rating:** ★★★★★7.5

JVC's latest consumer MiniDV digital camcorder is touted as being the smallest on the market – and I've certainly not seen one more compact. Easily pocket-sized, the GR-DVP3E is smaller than many digital-still cameras.

The camera comes with DV-in, essential if you want to transfer footage both to and from your Mac. What is disappointing is that JVC has done away with the DVL107, which at £750 (inc VAT) was the cheapest DV-In and -Out on the market. At least its successor has a feast of features to help justify this price leap – its portability not least among them.

### Crisp quality

The DVP3E has an 800,000-pixel high-resolution CCD, and its images are crisp and colour-accurate. Like many digital camcorders, the GR-DVP3E also offers a digital-still capability, which is always handy for posting images online or as email attachments. But with no built-in flash and a top resolution of 1,024-x-768 pixels, its still images aren't of startling quality. JVC claims its Super High-Band processor ensures a horizontal resolution of 520 lines, but none of the stills I captured were any better than average quality – although I didn't use it out of doors in better light. What is nice is the MPEG4 Video Clip function, that allows

you to store 200K, 20-second soundless video-clips to the camera's 8MB SD Memory Card. You can then use these as email attachments.

The camera also comes with a multimedia hub, which JVC calls the Info-Shoe. This gives the camera a USB port, S-Video-out and microphone jacks.

Another useful offering is JVC's Digital NightScope, which combines digital slow-shutter speed and image-progressing technology to boost light sensitivity in low-light shots. Colours end up washed out, but at least it gives serviceable footage in otherwise unshootable conditions.

Other features include a Colour LCD screen, remote-control unit, 10x optical/200x digital zoom with spline interpolation, image stabilizer and self-timer.

If you're an iMovie user, then many of the camera's trumpeted features will be redundant. These include its 12 digital effects and 17 transitions, and its slow motion, sepia and black-&-white modes.

### Macworld's buying advice

The JVC GR-DVP3E is a small digital camcorder that's big on features. Many things that are claimed to be pocket-sized are in fact anything but – unless you're a kangaroo. But this digicam's portability is



a real boon, and makes it ideal for capturing holidays and weddings – the Big Ones in any videographer's calendar.

Apart from being £450 more than the DVL107, my only other reservation is that the MiniDV tape twice jammed in the mechanism, once almost fatally for both cassette and camera. One of JVC's technical guys explained that I shouldn't have left the tape in overnight, but there was nothing in the manual about this. Before you buy one, I suggest you clarify this with JVC. Also, the camera doesn't come with a FireWire cable, which is irritating – especially when spending £1,200. Try your luck and bargain one into the bundle before buying.

Sean Ashcroft



Colour-accurate pics

## Nikon Coolpix 995

Manufacturer: Nikon  
(020 8541 4440)  
www.nikon-image.com/eng

**Pros:** Faithful colour-capture; accurate digital-zoom; impressive macro feature; excellent software bundle.  
**Cons:** The swivel design will not suit everyone; at the high end, manufacturers should offer higher-capacity CompactFlash cards in the box; battery life.  
**Min specs:** Mac OS 8.6-9.x; USB port.  
**Price:** £800 (including VAT)  
**Star Rating:** ★★★★★7.7

Nikon is famed for its cameras, and the 3.34-megapixel Coolpix 995 means business. Its predecessor, the Coolpix 990, won Editors' choice in September 2000's Macworld digital-camera round-up. The 995 maintains this honourable tradition.

Like most sophisticated bits of consumer electronics, learning to navigate its features takes time. It weighs 390g (without the battery). Nikon's claimed 110-minute battery life is optimistic. The unit eats power if the flash is used often, when doing a lot of digital-zoom work, or accessing functions through the LCD display. In mitigation, it's possible to shoot the equivalent of a roll or two of film before the power goes.

Nikon keeps the Coolpix's swivel design. The left- and right-hand halves of the camera revolve away from each other – so each hand is holding a slightly different shape. The advantage of this is that Nikon can bundle many features – for example, the flash – into unusual parts of the device. The disadvantage? I found it a little hard to maintain a steady grip. Conversely, half of those I spoke with thought it helped them keep a stable grip. I recommend testing this feature first to see how it feels for you.

Nikon claims the swivel permits a wider range of shooting angles, and makes the LCD viewer easy to see from almost any angle.

The 995 offers a 4x zoom Nikkor lens – the equivalent of a 35mm camera's 38-152mm lenses. There's a macro mode that enables shots at close range – up to 3cm. The pop-up flash (Speedlight) has been developed to minimize red-eye, and placed logically on the chassis. Colour consistency is maintained by the built-in noise reduction and saturation controls. Noise reduction improves the 995's night-shooting abilities when set for long exposure times.

Shooting speed maxes out at 3 frames per second (fps) with speeds of 8-1/2300 seconds supported. The maximum supported image resolution is 2,048-x-1,536 pixels. It'll also capture 40 seconds of moving images at 15fps.

The company has put a lot of its R&D Yen into colour management – with White Balance Bracketing automatically choosing between three different white-balance settings for improved accuracy. Nikon continues to develop its mysterious advanced image-processing algorithm – this delivers excellent colour capture. The 995's colour-capture abilities take



this unit into the professional as well as prosumer markets. The camera has a Quick Review button, providing swift access to captured images.

### Macworld's buying advice

Nikon's swivel feature takes some getting used to, but the 995 is a powerful, well-featured unit with accurate colour-capture, a great zoom lens and an impressive amount of functionality. Its macro feature offers fantastic results, and it's easy-to-use. However, as the media gets cheaper, I think camera manufacturers should begin bundling CompactFlash cards of a higher capacity than 16MB.

Jonny Evans



Safe home Net-browsing

## Internet Security Barrier

Publisher: Intego www.intego.com  
Distributor: Softline (01883 745 111)  
**Pros:** Excellent support and updates; control and protection.  
**Cons:** Uninstall feature flaky.  
**Min specs:** Mac OS 8.1; PowerPC.  
**Price:** £79.99 (including VAT)  
**Star Rating:** ★★★★★8.8

For those of you concerned about any of the security issues thrown up by the Internet, Intego's Internet Security Barrier (ISB) package could ease your paranoia.

Snooping by hackers, or denial-of-service attacks are much less likely to affect Macintosh users than our Windows counterparts. However, the gradual increase of home and office users browsing via an always-on connection makes the importance of personal-data security a high priority.

### Viral intrusion

ISB includes an intrusion detector, personal firewall, a Web-site content filter and an anti-virus checker. The NetUpdate feature automatically scans Intego's site for new virus definitions and software updates.

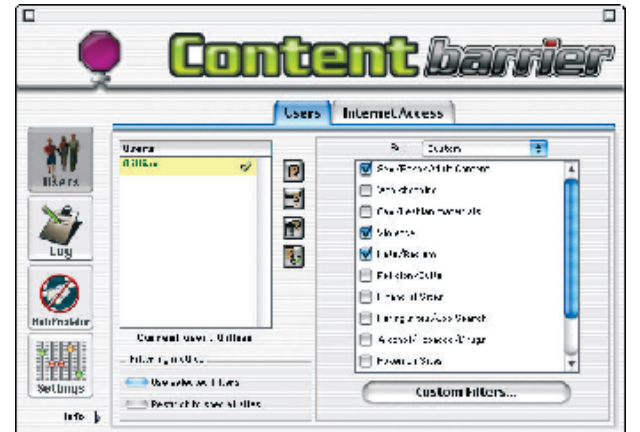
For parents worried about their offspring ending up in dodgy corners

of the Internet, Content Barrier provides control over what kids can log-on to. You can create different log-ins and passwords for users of a computer, and access privileges can be set for each user. For example, for a seven year-old, checking the prevent access to newsgroups, cults/adult or content containing references to violence settings will throw up a message saying access has been denied to this site by Content Barrier – so you won't have to constantly look over his or her shoulder.

However, as with any such system, it isn't infallible – especially if your password is easy to guess. Another danger is that you will inadvertently block a kid's access from a Web site that can help them. To avoid this, it's worth taking time to test your preferences within Content Barrier's settings. The default settings that come with ISB can be over-protective.

Most large companies will have a firewall installed at the network gateway to a local network. A firewall serves to protect the resources of a private network from unauthorized users. It can log and report activity about packet information being sent out, or to, the local network.

A personal firewall protects a single computer from network activity. This will become standard in the near future, as it is especially useful for users with always-on Web connections, such as those with ADSL or cable access. Something, or someone, scanning your network – or even trying to break into your Mac –



can be quickly detected and warning alerts emailed to you.

Recent spates of worms and viruses designed to attack Web servers have made national headlines. Many of these viruses cause disruption and can be stopped. ISB's Net Update feature automatically checks for new virus definitions – provided by Intego – downloads them, and installs the update.

### Macworld's buying advice

For an affordable, all-in-one solution that prevents unwanted problems on your Mac, Internet Security Barrier is an excellent choice. A single straightforward installation, and set-up and easy-to-use control panels, simplify the process of protecting both your computer and family.

Gillian Thompson

### Say no go

Not only can you set up the built-in filters in Content Barrier, you can also add your own custom filters to prevent access to certain sites.



Five-CD duplicator

## LaCie Dupli-125

Manufacturer: LaCie, (020 7872 8000)  
www.lacie.co.uk  
**Pros:** Fast and quiet; lots of options; works with many CD formats.  
**Cons:** You have to leave its door open.  
**Price:** £1,795 (excluding VAT), with ten blank CDs.  
**Star Rating:** ★★★★★8.2

Every month, I have to archive all the content of Macworld's sister publication, Digit. On average, there are five CDs per issue, and five copies of each CD – so when this five-CD duplicator was placed on my desk, I fairly whooped for joy.

The Dupli-125 is simple. It features CD drives: one DVD-ROM for the original, and five 12x CD-RW drives for the copies. The back panel features just two cooling fans, the on/off switch, and a power socket – there are no other Mac connections, as this is a stand-alone drive.

The unit's appearance is deceptively simple – the real power lies in the DVD-ROM drive, where you can set options for copying, rewriting, or erasing discs. Configuring the duplicator for the job in hand is a simple matter of using the Yes/No/Esc buttons to navigate a series of onscreen menus, then finalizing your choice. The display gives a prompt at each point of the procedure, telling you to insert the master disc, then opening the five CD-RW trays for the blank media. Pressing the Yes button starts things moving. The unit beeps when it's done, although this was barely audible over the din of the office.

Once I was happy that everything was working correctly, I set the duplicator to perform a burn and verify run. Five copies of my 698MB test disc were burnt and verified in 13 minutes 54 seconds. Burning and verifying five discs separately would've taken over 70 minutes. If you think that 13 minutes 54 seconds is a long time, remember that verification almost doubles the time taken. If you're in a hurry, verification can be disabled. Once finished, the Dupli beeps, and

ejects the discs. This worried me a little: my test unit was on the floor – if you're embroiled in work and don't notice the beep, you might well kick the open trays off as you walk past. The door on the front of the machine has to be left open while it's in operation, too – another target for your foot.

Many options are provided for ones copying needs: you can copy a disc with no verification; verify a disc without copying it; copy and verify a disc; copy and read-check a disc; perform a bulk-erase on CD-RW discs; and change the write-speed and session-mode.

### Macworld's buying advice

Those of you for whom archiving is a regular occurrence, the Dupli-125 will be something of a saviour. It's fast, quiet, and provides a large number of options. If you can put up with the open door and kamikaze media trays, you'll love it.

John Steward





Cocoa design-app

## Stone Studio

**Publisher:** Stone Design [www.stone.com](http://www.stone.com)

**Pros:** Wide range of capabilities; excels at converting documents to PDF and generating HTML photo-albums.

**Cons:** Drawing application ignores tried-and-true Mac conventions; no context-sensitive pop-up menus.

**Min specs:** Mac OS X

**Price:** \$299 (online)

**Star Rating:** ★★☆☆/6.4

Considering that Mac OS X is in part based on OpenStep technologies that Apple acquired from NeXT, it's not surprising that one of the first software packages created using Apple's Cocoa development environment likewise stems from OpenStep. The package in question, Stone Studio, is a collection of seven print- and Web-production programs that run the gamut – from art creation to client invoicing.

### Next generation

Although new to the Mac, some of these applications made their debut on the NeXT platform more than a decade ago. Perhaps as a result, the competent, but prosaic, Stone Studio feels less like the latest trend in graphics software, and more like a run-of-the-mill port from another platform.

At Stone Studio's core is Create 10.1,

a vector-based drawing program. Though less robust than its version number might imply – both Adobe Illustrator and Macromedia FreeHand offer several times as many features – Create does have a few tricks up its sleeve. Document-level layers serve as master pages, allowing you to add type and graphics to several pages at once. An object can comprise multiple fills and strokes, which in turn can contain a mix of opaque and translucent colours. And, unlike Illustrator and FreeHand, Create lets you animate transformation effects, such as rotation. The program then passes the frames to GIFfun, another program in the suite, that converts the artwork to an animated-GIF file. The process is so fluid, you scarcely notice that you're moving between applications.

One gets the feeling that despite Stone Studio's exhaustive support for OS X, its creators have little idea what today's artists expect from a graphics program. Traditional editing and navigation shortcuts go unobserved; the type tool lets you create text but not edit it, and there's no such thing as a context-sensitive pop-up menu. In short, it makes the already unfamiliar environment of OS X feel more alien than ever.

If that doesn't bother you, then other programs in the suite may appeal to your frontier spirit. For example, PStill allows for the conversion of EPS and PostScript documents into PDFs. These can be viewed inside OS X as easily as raw text. You can even convert Illustrator and

FreeHand documents that use standard Type 1 Mac fonts. PackUpAndGo compresses files; TimeEqualsMoney handles job tracking and invoicing; and SliceAndDice can subdivide an image into an HTML table. My favourite, PhotoToWeb, generates a slide show or HTML photo album from a folder of images.

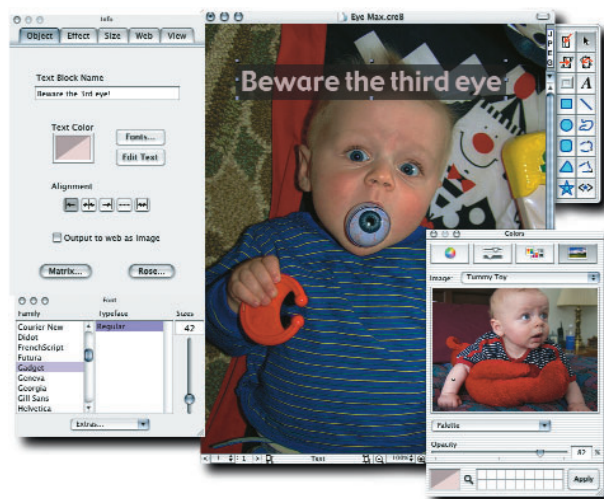
### Macworld's buying advice

The first design program written exclusively for Mac OS X is likely to seem as foreign to Macintosh users as the new system itself. Even so, the reasonable price and wide range of tools make this an attractive suite for designers on the prowl for native OS X applications.

**Deke McClelland**

### Stone age

*Stone Studio's best and worst attribute is its reliance on OS X. If you're already using the new system, Stone Studio gives you not only enough good features to warrant its price, but also a feel for the way native OS X applications behave. Sadly, until a host of OS X-savvy applications, font managers, and drivers appear, OS 9.1 will remain the more practical environment for professional designers.*



File transfer and ISDN software

## Grand Central Pro 3

**Publisher:** Hermstedt (020 7421 1500)

[www.hermstedt.co.uk](http://www.hermstedt.co.uk)

**Pros:** You don't need ISDN to take advantage of top-quality file transfer; hardware compression when using Hermstedt ISDN cards; e-t-f JobTicket tracking.

**Cons:** The IP directory LeoPages isn't ready yet.

**Min specs:** Mac OS 8.5

**Price:** £399; upgrade from GC Pro 2, £99 (both prices exclude VAT).

**Star Rating:** ★★★★★/9.0

Hermstedt, the market leader in ISDN hardware and software, has just released the latest version of Grand Central Pro, and it includes a facility for non-ISDN communications. This means you will be able to use the functions of GC Pro without having ISDN.

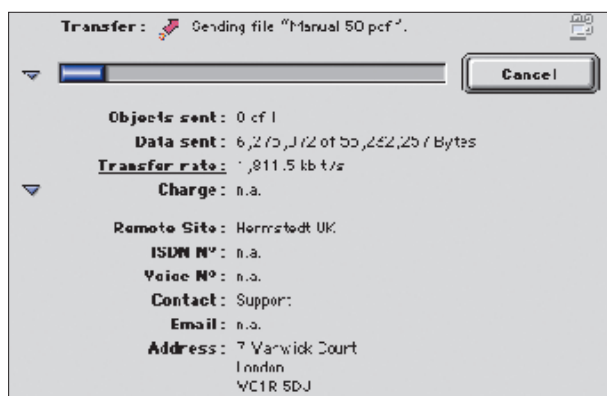
GC Pro enables a Mac to talk to other machines and to transfer files. Initially,

this meant deciphering all the languages spoken by ISDN cards internationally. The new version adds to this by allowing file transfer over IP – such as ADSL.

Usually, Internet connections would need a static IP address to be used for file transfers with FTP. This is fine for big companies, but smaller businesses don't necessarily have a static IP address. Instead, a dynamic IP address is used, which can change without warning. To solve this problem, GC Pro 3 will connect to the Leonardo Service Directory when it goes online later this year. Users that have dynamic IP addresses register with the Leonardo Directory and then keep it updated.

GC Pro still supports ISDN solutions, and can handle dozens of connections at once – simultaneously sending, receiving and providing Internet connectivity. This is possible using multiple ISDN cards, or a single 30-channel card such as the Hermstedt Angelo.

The rest of GC Pro 3 is much the same as version 2. It still has hardware compression when it talks to other



Hermstedt cards, but it does include e-t-f JobTicket for tracking jobs. If attempting to send to a GC Pro site, almost any protocol is supported.

### Macworld's buying advice

For the first time, Grand Central Pro is open for business using non-ISDN communication. This will make it even more popular. The more options it has, the more pervasive it will become.

**David Fanning**

### Carving block

*The Mac OS X version of Grand Central Pro is still in development. Hermstedt's programmers have been having problems with the lack of development tools available for writing drivers, describing the process as like "trying to build a car by carving it from a solid block of aluminium".*



**Cleaner MPEG Charger/ MPEG Supercharger**

**Publisher:** Media 100  
(01344 412 812)  
www.media100.com

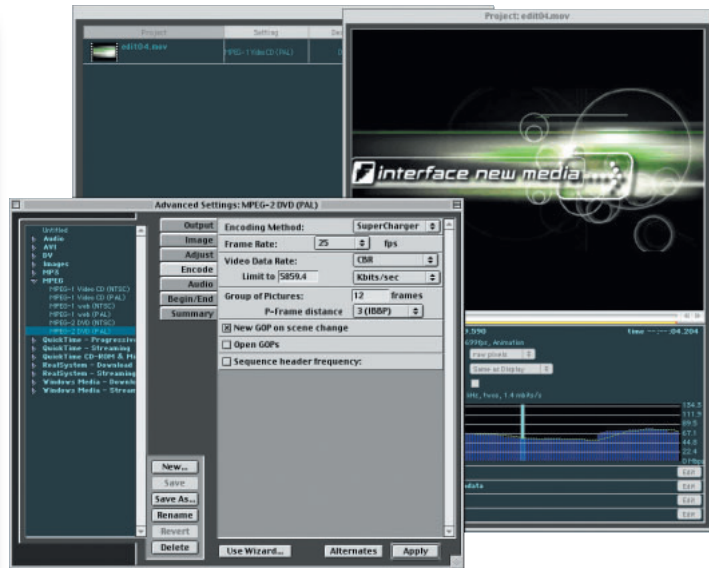
**Pros:** Greater control over MPEG compression; speedier performance.

**Cons:** Limited use to general users; Supercharger lacks MPEG-1 options.

**Min specs:** Cleaner 5; QuickTime 4.1.2; Mac OS 8.6; 64MB RAM.

**Price:** Charger, £349; Supercharger, £729 (both excluding VAT)

**Star Rating:** **Charger: ★★★★★/7.0**  
**Supercharger: ★★★/6.9**



#### Charged up

Supercharger compressed this 1.5-minute video for DVD output in just over 22 minutes.

**C**leaner (formerly known as Media Cleaner Pro) has established itself as the leading video-compression software. It allows digital-video producers, Web developers and multimedia designers to compress video into a number of different formats – such as QuickTime, AVI, RealMedia and MPEG – and optimize it for playback on a wide range of media, including broadcast, CD, DVD and online.

By default, Cleaner features rudimentary support for two flavours of MPEG video compression – MPEG-1 and MPEG-2. MPEG-1 is a full frame-rate video-compression format with a data rate typically of 400K per second (Kbps), and is typically compressed at quarter size – for example, 352-x-288 pixels for PAL – or at smaller sizes for Web delivery. It can be played back on a desktop computer using QuickTime or Windows Media Player, and is often used instead of QuickTime .MOV files on multimedia projects.

MPEG-2 utilizes a much higher data

rate of around 6Mbps per second, and encodes at full screen size – for example, 720-x-576 for PAL at broadcast quality – and full frame rate (24-30fps). It's used mainly for DVD, and requires special hardware acceleration for playback on a desktop computer.

#### Charge forward

Cleaner 5's default support for these formats gives you little control over the data rate or other output options of either format, though for most users this will be sufficient. What MPEG Charger does is extend Cleaner's functionality and add a greater level of flexibility to MPEG-1 and MPEG-2 compression. MPEG Supercharger works only with MPEG-2 files, and includes a PCI card that accelerates the MPEG-2 compression from within Cleaner.

With Charger installed, Cleaner works in virtually the same way, except that now there are a few more options in the Advanced Settings when compressing

either MPEG-1 or MPEG-2. Clicking the Image tab will allow you to determine the dimensions of the compressed file, and choose an aspect ratio, such as 4:3 for PAL or NTSC, or square pixels. MPEG pixels are not always square for DVD playback, so this can get quite complex. However, this added feature means that professional MPEG-developers can now use Cleaner for encoding footage for DVD.

The greatest flexibility that Charger gives though, is with encoding options. Whereas in Cleaner you had to accept the defaults, with Charger you can set a particular data rate, and this can be a constant data-rate (CDR) or what is called one- or two-pass Variable Bit Rate (VBR). You can also alter what is called the Group of Pictures (GOP), and P-frame distance to change the file size and image quality – but you need to know what you're doing here, as it's easy to create non-standard settings that may be incompatible with certain devices.

Cleaner Supercharger provides hardware acceleration for MPEG-2 encoding through a PCI card that slots into a G3 or G4 tower, as well as installation software to upgrade Cleaner 5. Given that a minute of raw footage can take about 1 hour to encode in Cleaner, if you do a lot of MPEG-2 encoding any help is valuable. With the card installed, encoding times are slashed to a quarter, thanks to the dedicated encoding chip. Serious users will want to use Media 100's MediaPress product for real-time encoding.

But that's all Supercharger does – it would've been useful if the Supercharger card also worked as an MPEG playback card, so you could actually preview the MPEG-2 files created. For MPEG-2 playback, Wired makes a high-end hardware decoder called WiredStream. Neither does Supercharger give any of the MPEG-1 features of Charger, which means you'll still need Charger for MPEG-1 options.

#### Macworld's buying advice

Charger puts pro-level MPEG control in the hands of the desktop user, while Supercharger accelerates MPEG-2 compression to a more reasonable level. With DVD-writers becoming available in top-of-the-range G4s, more users will want to experiment with the MPEG-format video. For most users, the basic MPEG support in Cleaner 5 will be adequate. Those looking to master the art of MPEG encoding will find either of these products a relatively low-cost entry into a dizzyingly complex brave new world.

**Martin Gittins**



#### 4D Developer Edition 6.7

**Publisher:** 4D (01625 536 178) www.4duk.com

**Pros:** Improved productivity.

**Cons:** Not all features are cross-platform.

**Min specs:** G3; Mac OS 8.5; 32MB RAM.

**Price:** 4D Standard Edition 6.7, £195;

4D Developer Edition 6.7, £495;

4D Server 6.7 (2 users), £595

(all prices exclude VAT)

**Star Rating:** **★★★★/8.1**

**W**ith version 6.7, 4D has kept up the continual improvement of the last ten years. Today, 4D is ready to face the challenges of the Internet and e-commerce. Its relational database remains the number-one applications-creation tool for professionals, ahead of FileMaker Pro.

At first sight, one could think that this new version of 4D is a minor update. After all, the software only moved from version 6.5 to 6.7 – but that's not true. This new version brings a number of improvements aimed at helping developers work. And 4D's commitment to the Internet is stronger than ever.

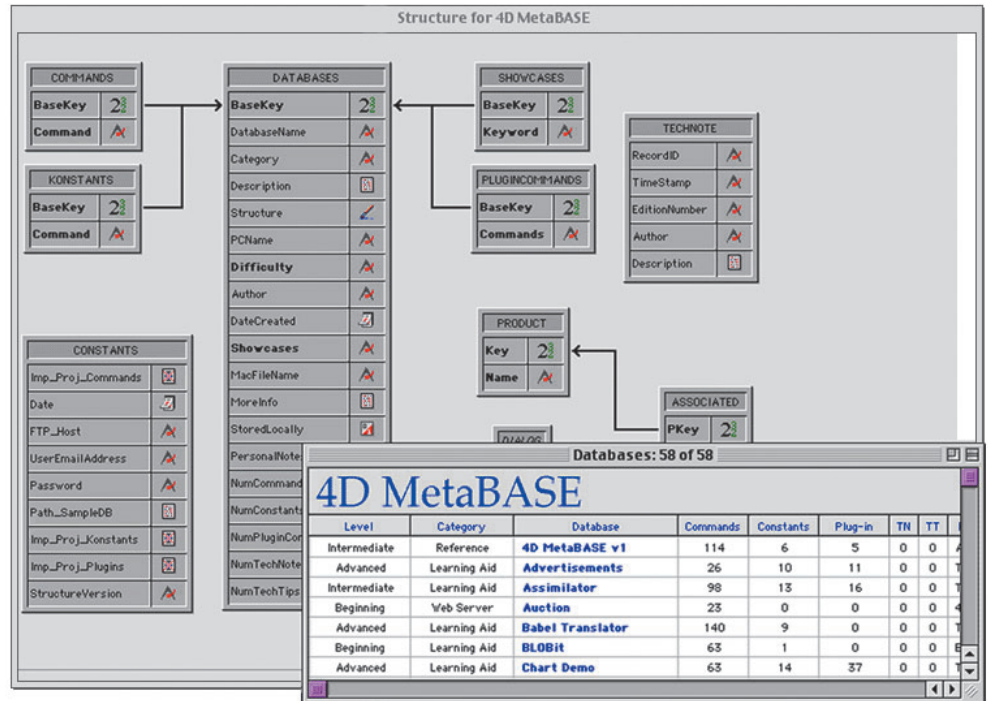
#### Net service

Since version 6.0, 4D has come with an HTTP server – Web 4D. But to become a truly helpful solution for developers, it needed a third-party software called ITK (Christian Quest's Internet Toolkit). Things improved with 4D 6.5, as it could create Web sites that would behave as any other – with the correct management of the Web browser's Next page and Previous page buttons, for example. But work remained to be done.

With version 6.7, the work environment has been optimized in a major way. The server is now much more efficient as far as the cache is concerned. It supports the SSI protocol (data and transactions exchange-securement based on the RSA public/private key concept). And it handles a number of industry standards such as XML, HTML 4.0, Java, CSS1, ISAPI (a Microsoft protocol used to interface with other HTTP servers under Windows NT or 2000), and even WML – the language for WAP.

Web 4D makes the most of external CGI's, such as the extensions for WebStar or PERL scripts. But 4D 6.7 is also able to interface with every CGI-compatible HTTP server, including such big names as Apache.

And it's precisely thanks to that capacity (behaving as a CGI for other servers) that 4D interfaces directly with



the WebStar HTTP server. That is no surprise, since 4D has acquired the most successful Mac OS Web server. Let's be very clear though: WebStar doesn't replace Web 4D, but offers brand-new opportunities to build more ambitious Web sites. And its integration is likely to go even further in a forthcoming version of 4D, thanks to the components concept. We'll say a word about that in a moment.

#### Team player

With 4D 6.7, it's even easier to work as part of a team – for both those who define and program databases on one side, and, on the other side, those who conceive the human dimension of a Web site. Everyone can now concentrate on their task. 4D 6.7 gives freedom back to creators.

For codephobic Web-site designers, a new component, 4D Web Assistant, is helpful when publishing databases on an intranet or over the Internet. This assistant gives full access to the dynamic pages' HTML code via an HTML editor. Unfortunately, even in the standard version, it's unintuitive. And in the standard version of 4D, it can be used only with new databases. If you wish to open already existing files, you'll need 4D Insider, available only with 4D Developer Edition.

As far as the Web and 4D are concerned, a great number of new HTML tags can now be used with the SSI. 4D's own language follows the same evolution. 4D 6.7 supports QuickTime 4 and authentication certificates for safety and encryption.

What is 4D's integration with 4D WebStar and 4D WebAssistant all about? Well, this trio is 4D's answer to the developers' needs in terms of protection. In private mode, the content of a component cannot be touched, it can't even be seen. It also guarantees a greater reliability of the code – for example, managing an update is easier. The creation of those components might be the foundation of an object's trading market (free or commercial) between members of the 4D development community.

4D 6.7 also brings a bunch of new commands which promise to make 4D's language even richer. We counted 24 new commands – for instance, manipulating aliases as well as Mac OS folders – and over 15 existing commands are improved.

#### Macworld's buying advice

4D is a development environment as well as a Mac OS server solution (the OS X version is coming soon). But it also runs on Windows 95, 98, Me, NT and 2000. 4D provides wide compatibility in order to program and deploy cross-platform applications. With version 6.7, there's less need to use the 4D Transporter utility to carry structure and data files from one OS to the other – however, not every feature exists on all platforms.

Also, the user interface in the client application can adapt to the operating system's interface. It even changes with users' appearance preferences.

**Alain Laisse for Unvers Macworld (France). Translated from French by Benjamin Vincent.**

#### Family tree

Within 4D's design environment, a developer can see a graphical representation of how the databases will relate to each other.

## Supercharged MPEGs

Best results in test. Shorter bars are better.

Compression software	MPEG-1	MPEG-2
Cleaner	26:30	60:36
With Charger installed	20:23	60:36
With SuperCharger installed	20:23	22:36

#### Behind our tests

Source file: 1 minute 29 second uncompressed QuickTime .MOV (526MB).

Tested on 400MHz Power Mac G3, with 384MB RAM (Cleaner 5 assigned 43470K), Mac OS 9.0.

Test settings:

MPEG-1 compression – using Video CD setting, 25 fps, 1.1MB per sec, 352-x-288 PAL – compressed to 15.8MB.

MPEG-2 compression – using DVD setting, 25 fps, 5.7Mbit per sec, 720-x-576 PAL – compressed to 64.2MB.

# Macworld reviews



Alternative operating system for PowerPC Macs

## SuSE Linux 7.1 PowerPC Edition

**Publisher:** SuSE (020 8387 4088) [www.suse.co.uk](http://www.suse.co.uk)

**Pros:** More than 1,000 program packages; easy-to-use configuration tools.

**Cons:** Some packages are outdated.

**Minimum specs:** PowerPC; 150MB hard-disk space.

**Price:** £35 (including VAT)

**Star Rating:** ★★ ★/6.9

**F**ans of SuSE Linux, one of the most popular Linux distributions, will be pleased with this easier-to-install release for PowerPC Macs. Consisting of more than 1,000 packages on six CDs, SuSE Linux 7.1 includes a 500-page manual, a 2.4.2 Linux kernel, K Desktop Environment (KDE2), Advanced Linux Sound Architecture, and better USB support.

Disk-space requirements vary from 150MB for a minimal system install to 6GB for the full install. Installation is straightforward; the simplified YaST2 setup tool lets you interactively configure printers, sound devices, network cards, IP routing, security, and system services.

KDE2, a popular Linux window manager, is now the default desktop. It includes KOffice, an integrated office suite; KIO, KDE2's network-transparent I/O architecture;



### Simple setup

*You can configure most hardware and services using the powerful YaST2.*

ARTS (Analogue Realtime Synthesizer); and Konqueror, a full-featured Web browser, file manager, and document viewer. Alas, the XFree86 3.3.6 X Window System is still the default server, even though the distribution includes XFree86 4.0.2. Some other bundled programs are also outdated.

### Macworld's buying advice

A huge collection of packages and a simple setup tool make SuSE Linux a useful alternative to Mac OS for desktop and server apps. The 7.2 release should fix the only problem: outdated packages. **Ulysses Bravo**



X-ready friendly database

## FileMaker Pro 5.5

Publisher: FileMaker (01628 534 158)

www.filemaker.co.uk

**Pros:** Mac OS X compatible;  
Mac-PC compatible.

**Cons:** Limited new features;  
sluggish Web performance.

**Min specs:** OS X: 128MB RAM,  
Mac OS 8.6: 32MB RAM

**Price:** £219; upgrade, £125

(both prices exclude VAT)

**Star Rating:** ★★★★★7.9

The raison d'être for the release of FileMaker 5.5 is to make it compatible with the latest operating systems from Cupertino and Redmond. But aside from the Mac OS X support (and Windows 2000), there's little here to make it worth laying down £125 for. Having said that, FileMaker remains a fine product, and for Mac users just about the only option — with the notable exception of 4D (see page 55).

FileMaker's emphasis on building neat interfaces for record-entry and updating makes it an ideal tool for creating catalogues and other records. There are thousands of people happily using FileMaker, and constructing complex data structures, who wouldn't touch a relational-database application with a ten-foot pole.

### Embarrassing relations

FileMaker became a relational database with version 3, though I've always regarded this as a bit of a kludge, given that each table in the relationship is stored as a separate file — even a simple look-up table such as company departments or product categories. Let's face it — FileMaker is never going to be the fastest database on the block, but it is arguably the friendliest.

Most of the new features in 5.5 are functionality enhancements at the periphery of the application, such as scripting improvements, and minor security enhancements: you can restrict access on a record-by-record basis.

FileMaker has improved the data import and export capabilities of the application, offering better integration with Microsoft Excel — you can now import named ranges — and extended ODBC (Open Database Connectivity) and SQL (Structured Query Language) functionality.

The SQL support is only really applicable to import and export data, or for working with external data-sources — you cannot use SQL queries to search

FileMaker databases, which seems curious. FileMaker's ODBC support is not currently supported in Mac OS X.

FileMaker's Web integration is well implemented, and simple for the non-technical user. The Instant Web Publishing features allow you to export the database as a static read-only database, or as a dynamic database. With the dynamic database, users can update records and add new records through a Web browser using a middleware application, such as the included Web Companion.

This is quick and easy to set up, and you can see a Table View page for working with several records at a time, a Form View page for viewing and editing a page, as well as search and sort options. All that's needed is an active TCP/IP connection. Security features allow you to limit access to certain IP addresses, use the FileMaker Pro Access Privileges, or the Web Security Database for greater control over restrictions.

Online database publishing has never been so easy. The new version is faster, and now supports HTTP 1.1 as well as 1.0. Still, while FileMaker has made large strides in turning FileMaker into a Web-friendly application, for high-volume Web applications you will want to use something leaner and meaner. Similarly, the lack of enterprise-level security features, such as transaction locking and rollbacks, make it unsuitable for certain tasks.

As well as Web-based database publishing, you can also share databases over a local network or workgroup using the built-in FileMaker Server.

One machine acts as a host into which guest computers connect — although all computers need to have the FileMaker application installed. The great thing about this with FileMaker is that it will work with both Macs and PCs, all connecting to the same host and sharing data. The new access restrictions that allow locking on a record-by-record basis add greater flexibility to these small-scale workgroup databases.

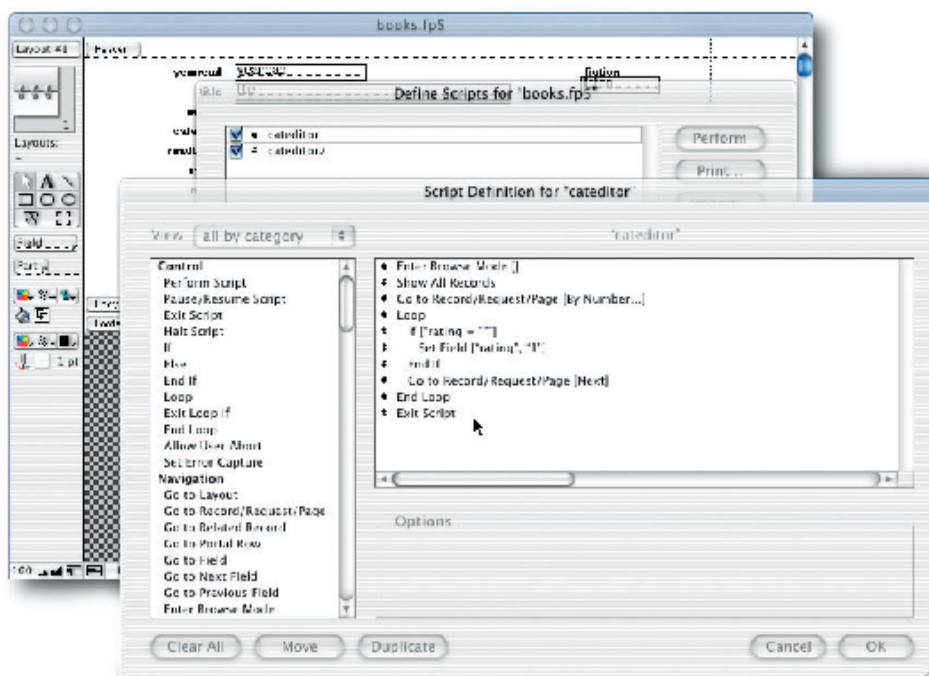
FileMaker can connect to external data-sources to share data using ODBC, which has been significantly improved to increase compatibility with SQL databases, such as Microsoft SQL Server and Oracle.

Searching data in FileMaker is fine for simple options such as matching entries on one field, but more sophisticated queries can take some getting used to. To modify data based upon certain criteria, you'll also need to use the ScriptMaker tool. A script consists of a set of commands, with various conditional statements and other clauses to extract and manipulate the data. Advanced users can quickly build scripts to clean up imported data.

### Macworld's buying advice

FileMaker 5.5 works well in OS X, and contains a number of minor functionality enhancements. But this will hardly catapult it to the top of your must-buy list. FileMaker's strong points, such as the excellent layout control and ease of use, remain its key strengths, while its relatively slow speed and complex query tools remain its main weakness.

**Martin Gittins**



### Script control

*Scripts can be written to do a lot more than data manipulation in FileMaker Pro 5.5, and they allow powerful control over the operation of FileMaker, such as automated-tasks processing, and exceptional control over formatting and layout. But it would be nice to be able to write queries in SQL syntax to sort data, update it and even export it, as you can with external data using the new Execute SQL script. There are quite a few new commands for logical, design and status functions, so if you are a FileMaker script-hound, working in 5.5 should be a lot easier.*



QuickTime authoring

## QuickTime Pro 5

**Publisher:** Apple (0800 039 1010) [www.apple.com/uk](http://www.apple.com/uk)

**Pros:** Greatly improved media player; enhanced authoring features; skip protection.

**Cons:** Inferior streaming-audio and -video quality.

**Price:** £21 (including VAT)

**Min specs:** System 7.5.5.

**Star Rating:** ★★★★★/8.0

On the cusp of its tenth birthday, Apple's multimedia platform has turned 5: QuickTime 5 is now available for Mac OS 9, Mac OS X, and Windows. The new version improves audio and video authoring and playback for everyone from broadcast professionals and Web publishers to Internet and iMovie users. As a streaming platform for the Internet, QuickTime still has some disadvantages that Microsoft's Windows Media and RealNetworks' RealSystem don't, but this version narrows the gap.

As with previous versions, Apple is distributing two flavours of QuickTime 5: a free version that simply plays media, and the £21 QuickTime Pro, which allows authoring, and lets you save downloaded QuickTime movies to your hard drive. I tested the Pro version, but unless otherwise noted, everything in this review applies to both versions.

QuickTime 5's improvements include an enhanced DV codec, which dramatically improves image quality and speeds rendering, and virtual-reality technology that now allows cubic panoramas, letting users look up and down, as well as left and right.

Alas, neither Apple's QuickTime VR Authoring Studio nor VR Toolbox's VR Worx can yet create cubic panoramas.

QuickTime Pro now lets developers wrap movies in custom frames called media skins. A media skin can be a simple graphic that replaces the standard QuickTime Player window, or it can contain clickable buttons created in Totally Hip Software's LiveStage Pro or Macromedia's Flash. (Skinned movies won't play in QuickTime 4 or earlier versions.)



### Time saver

QuickTime 5 offers greatly enhanced AppleScript support. Most scripts require QuickTime Pro, however, and aren't compatible with the Mac OS X version.

Speaking of Flash, QuickTime movies can now include Flash 4 content. Though Flash is at version 5, Flash 4 support lets developers give QuickTime movies interactive features.

Version 5's QuickTime Player is dramatically improved, with a cleaner, more straightforward interface. The Pro version adds controls for video brightness, contrast, and tint.

To improve the playback quality of streaming (versus downloaded) content, QuickTime 5 offers skip-protection features – it preloads and caches incoming data to reduce drop-outs caused by Internet congestion and transmission vagaries. But these features require that content providers use the new QuickTime Streaming Server 3 – and most don't.

Compared with the latest streaming

codecs from Microsoft and RealNetworks, those in QuickTime deliver inferior audio and video quality. There's hope, though: some third-party companies are working on new streaming codecs for QuickTime, and QuickTime 5's new updating mechanism enables it to receive and install codecs as they become available.

### Macworld's buying advice

Although QuickTime still falls short of competing streaming-media technologies, it remains the platform of choice for delivering downloadable movies. This is the best QuickTime release to date, and the Pro version – with its video-quality controls, AppleScript support, and enhanced authoring features – is the best reason yet to upgrade from the free package.

**Jim Heid**



Photoshop plug-ins

## Buzz Professional 1.0.3

**Publisher:** Segmentis (01223 701 701) [www.segmentis.com](http://www.segmentis.com)

**Pros:** Buzz offers genuinely new capabilities, using its unique image-simplification and edge-detection algorithms.

**Cons:** The interface is basic.

**Min specs:** Photoshop;

Mac OS 8.5.

**Price:** £79 (excluding VAT)

**Star Rating:** ★★★★★/7.8

At first glance, Buzz Professional is just another Photoshop plug-in. However, it's actually a few plug-ins held together by a single interface – called the Stack – allowing each of the plug-ins to be added together to make a kind of custom plug-in.

There are also two pre-set Stacks designed to give either a watercolour or oils effect – both are rubbish. The watercolour filter is a mess, though it might work with the right image. The oil effect, meanwhile, turns your image into something a lunatic would draw on the wall of his padded cell if he had an unlimited supply of magic markers.

Of all the parts of the Stack, the most interesting is the Simplifier filter. This removes detail from a photograph, but preserves edges, sharpness and colour. This is an odd thing to want to do, but – with a little tweaking – the results are good. Taking out detail makes a

photograph look more artistic, with a watercolour-like effect.

There are problems with the Stack though. For instance, there is a preview window that has a percentage-zoom setting activated by a slider, or you can type the percentage into a box. However, if you attempt to type in the number, it comes up with an error message saying that the minimum value is 10. If you then type 50, because the first digit typed is less than 10, the alert comes up again. It's easily remedied by using the plus and minus buttons, but it's a sign of poor design.

### Macworld's buying advice

There are infinite possibilities available with Buzz Professional, but it does take



### A simplified sample

The Simplifier is the most useful of the Stack functions, taking out detail without blurring.

a little while to understand how to achieve the required effect. However, it's a great addition to the existing Photoshop filters – offering something genuinely new. You can see the effects it can create by visiting the Segmentis Web site ([www.segmentis.com](http://www.segmentis.com)).

**David Fanning**





## Low-cost family games

**T**he game industry moves fast. The shelf life of many computer games is now measured in weeks. But low prices can be deceiving, because they don't necessarily indicate low value. If you look in the right places, you'll find some terrific games out there that cost nothing – or next to it.

All three of the hard-to-find gaming treasures I'm about to share with you have a few things in common: they're inexpensive or free; they don't demand ridiculous amounts of memory or processor performance; and they're fit for the whole family.

As a youth, I wiled away many an hour in my local video-game arcade, listening to Duran Duran cassettes on my Walkman. Back in the 1980s, Disney released *Tron* – a movie that gave me (and countless other young nerds) a totally different idea of what one could do with computers. The film mixed computer animation with live action footage to tell the story of a programmer unwittingly placed inside the world of a computer. Although it wasn't the greatest story ever told, the graphics – painstakingly rendered on a Cray supercomputer – were absolutely stunning.

Thanks to advances in graphics and processing power over the intervening two decades, any PC or Mac can now render graphics of even better quality than the Cray could 20 years ago. That's opened the door for programmers such as Andreas Umbach, who introduced GLtron (an open-source game that uses OpenGL graphics). Now, thanks to programmer Darrell Walisser, GLtron has come to the Macintosh.

In GLtron, you and your computer opponents pilot lightcycles across a vast, flat, grid-like arena. As you ride, light barriers stream behind you. Make contact with a barrier – your's or your opponents' – and it will blast you to smithereens. Essentially, the game is a 3D version of Snake, in which your goal is to trap your opponents and avoid their traps. GLtron gets a bit repetitive after a while, but it's a great deal of fun – perfect for a quick pickup game, and you can't beat it for the price (free).

Even though GLtron has sophisticated animation, it can run at high frame-rates, even on slower systems. This should appeal to users of older iMacs and other systems with only modest 3D-graphics acceleration. A separate team is working on a Mac OS X version of GLtron.

Another gem I love is Bushfire. It comes from two brothers, Aaron and Adam Fothergill, who have started



a game-publishing and development firm called Strange Flavour. Bushfire is straight-up, old-school, side-scrolling fun.

You pilot a helicopter, and your goal is to put out fires in the last forest populated by the rare, endangered goose spruce tree. You control the blaze by commanding parachutists to jump out of your helicopter and by dropping water from tanks on its underside. You can pick up your jumpers and transport them elsewhere, and you can refill your tanks by landing in forest streams.

### Lava, duck

The challenges become progressively more difficult with each level. Eventually you must dodge airborne hazards, such as flying lava rocks, try to trap mad arsonists, and rescue civilians whose aircraft have crashed in the woods. One cool feature is an Extras folder full of Easter eggs and other goodies.

If you're familiar with classics such as Choplifter or Armor Alley, you'll understand what the brothers Fothergill are attempting here; but the goal in Bushfire is the opposite – you aim to preserve, not to destroy. Bushfire is an extraordinary bargain at £2, given the hours you can spend playing it. It's perfect for a PowerBook and your idle commuting time on the train. Best of all, Bushfire is Carbonized, so it should run on Mac OS X without a hitch, despite previous compatibility problems in the course of development. The most current version as of this writing – 1.10 – works solidly in both Mac OS 9.1 and Mac OS X.

For a game with a completely cheesy plot that's lots of fun, try out Captain Bumper. This comic action-title comes from MacRun Games, a new Mac-game developer based in France.

Captain Bumper strongly evokes the game style made popular by the 16-bit

video-game consoles (such as Super NES) ubiquitous in the early-1990s. You take control of a square-jawed hero piloting a spaceship on a mission to save a damsel in distress (of course). With his bomber jacket, aviator glasses, and Bananaman smile, Captain Bumper makes his way through space, into labyrinthine caverns, and across inhospitable terrain, all the while fending off the attacks of vicious green alien critters bent on destroying him. You can collect power-ups, recharge your fuel and weapons supply, and boost your shields as you make your way toward the princess.

Captain Bumper is ideal for families in search of addictive fun. The game has cartoonish graphics and rich, colourful backgrounds with great detail. The core engine, developed by Richard Soberka, runs silky-smooth, just like a console title.

Captain Bumper's licensing works a bit differently from that of the other games mentioned here: MacRun takes advantage of distribution on the Internet even though it's a commercial game. You can download a two-level demo version from the company's Web site, and if you like it, you pay the licensing fee.

If I have a complaint about Captain Bumper, it's that it's too short. I'd love a level editor, or more add-ons.

### Macworld's buying advice

For me, the three words "cheap, wholesale entertainment" pretty much summarize these three games. One is free, another is next to free, and the third is less expensive than many games out there – that means GLtron, Bushfire, and Captain Bumper will eat up less of your money and more of your leisure time. And the best part is, you can download all three and try them right now.

**Peter Cohen**

### Say cheese

In Captain Bumper, you get the best of old and new – early-Nineties-style arcade, action, and modern Mac design – as well as a plot the whole family can enjoy.

## GLtron

**Publisher:** Andreas Umbach  
[www.gltron.org](http://www.gltron.org)

**Pros:** Runs great on older machines; fun for 1980s nostalgia buffs.

**Cons:** Repetitive.

**Min specs:** Mac OS 8.1; 200MHz processor; 32MB RAM.

**Price:** Free (online).

**Star Rating:** ★★★★★7.6

## Bushfire

**Publisher:** Strange Flavour  
[www.strangeflavour.com](http://www.strangeflavour.com)

**Pros:** Simple to learn but gradually more challenging; full of oddball humour.

**Cons:** Might not sufficiently challenge hyperactive twitchgame fans.

**Min specs:** 300MHz G3; 32MB RAM.

**Price:** £2 (online)

**Star Rating:** ★★★★★7.5

## Captain Bumper

**Publisher:** MacRun Games  
[www.macrun.com](http://www.macrun.com)

**Pros:** Top-notch animation, sound, and graphics.

**Cons:** Too short; in Mac OS X, initial release supported only in the Classic environment.

**Min specs:** Any PowerPC-based Mac (G3 or higher recommended); Mac OS 8.6; 42MB available RAM.

**Price:** Euro 29 (online).

**Star Rating:** ★★★★★7.8





Fisheye stitching tool

## Panoweaver

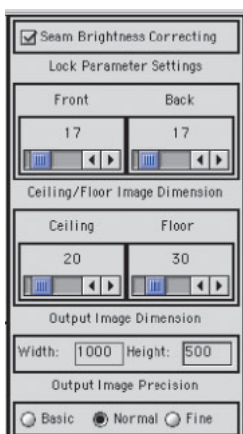
**Publisher:** Panorama Technologies  
www.easypano.com

**Pros:** Stitches fisheye images to provide 360-degree panoramas; no per-panorama fee.

**Cons:** Slow; not a full solution for creating QuickTime files.

**Min specs:** PowerPC; System 7.6.1; Runtime for Java 2.2; 64MB RAM.  
**Price:** \$99.95 online.

**Star Rating:** ★★★★★7.5



### Blanket stitch

Panoweaver offers a limited range of stitching options, but it doesn't offer the same customizing options as QuickTime VR.

Ever since Apple released QuickTime 5, content creators have been eyeing with a raised eyebrow its ability to display cubic VR, how do you make use of it?

This latest incarnation of QuickTime VR, included with QT 5 Pro, allows viewers to see the ceiling and floor, as well as the traditional walls of cylindrical panoramas.

The question is, how to capture such a large field of view? You could take several rows of images and stitch them together, but a panorama that needs up to 50 individual images is prone to all sorts of stitching errors.

The simplest way is to use a camera with a fisheye lens, which boasts a field of view greater than 180 degrees. Take two shots back to back, stitch them using the few degrees of overlap, and away you go.

Until recently, the only way to do this was using difficult-to-master freeware or by buying Ipx software and paying it for every panorama produced. But now a new fisheye stitcher has arrived: Panoweaver.

### Simple stitching

A product of German developer Panorama Technologies, Panoweaver could not be simpler. Take two fisheye shots, load them into Panoweaver and click the stitch button. No mess about calculating the field of view or calibrating lens types, all you do is tell the software what size final image and what level of quality you want, and it does the rest. However, it can take a very long time to render at higher file sizes and quality settings – even on a G4.

There is a preview option, but this is pretty quirky. Click on the preview button and your browser launches, loads the panorama file into a supplied freeware Java viewer, then you see the result. A trifle long-winded perhaps, but there is a reason for this. Panoweaver produces a bitmap file that can be loaded onto a Web site with a suitable Java viewer, or it can be taken into Apple's MakeCubic – a free download which takes the



### Weaving looms

Panoweaver allows images taken with a fisheye lens to be stitched together. This means that instead of using tens of pictures, only two are needed to create a 360-degree panoramic picture.

bitmap and converts it into the all-important QuickTime file.

This may make Panoweaver seem less than a full solution, and in a way it is. You can't feed images in one end and receive QuickTime files out the other, but it does allow you the flexibility to decide how to display work. Using Java allows browsers without QuickTime installed to see panoramas – an important consideration for commercial users who need to promote locations or property to as many people as possible.

If the stitch is not perfect the first time, you can adjust the area of the fisheye image that the stitcher examines. This allows the user a degree of fine-tuning, but gives nowhere near the level of control provided by traditional cylindrical stitchers, such as Apple's QuickTime VR Authoring Studio, or VR Toolbox's VR Worx. In fact, it can be a hit-or-miss affair.

This makes it vital that shots are taken accurately with a level tripod and special panoramic tripod-head. If shots are not properly aligned, you have no hope of getting a perfect stitch. Pan down

in the resulting panorama, and you'll see the top of the tripod, which can spoil the experience somewhat. Panoweaver takes care of that by letting you size and insert a circular graphic, known as a cap, which covers the unsightly intrusion. It also allows for a little self-promotion, copyright info or a picture of your cat – if that is how you like to do things. There is also the option to add a logo to cover the view above.

### Macworld's buying advice

After a long wait, photographers using fisheye lenses can stitch images with software that's easy to use and gives good results. The final images may need a little re-touching and sharpening, but that's something hopefully that can be addressed in future releases. You also need more software to produce QuickTime movies. But as it stands, Panoweaver is the only way to go for those wishing to author cubic VR with just two shots. It's not perfect, but ground-breaking software rarely is.

**Graham Springett**



Fun in ancient Egypt

## Sethi

**Publisher:** Montparnasse  
www.montparnasse.net/english  
**Distributor:** Koch Media  
(01256 707 767)

**Pros:** Absorbing; good value.  
**Cons:** Review copy unfinished.

**Min specs:** PowerPC; System 7.5.3; 48MB RAM  
**Price:** £19.99 (including VAT)  
**Star Rating:** ★★★★★7.0

Sethi and the Crown of Egypt is a voyage-of-discovery game pitched at the 6-9 age group. It's set in ancient Egypt, in which the eponymous hero of the game, Sethi, goes on the hunt for the Pharaoh's royal crown. Without this, the ruler is powerless to defend his nation from an all-consuming plague of locusts.

Using a mixture of pop-down maps and point-&-guess mousework, the user guides Sethi through his mission. Clicking on fishermen, papyrus makers and peasant farmers sparks conversations

that yield vital clues. Moving from scene to scene also requires that Sethi pick up certain items that he can use later in the game. This is not always straightforward – at least it wasn't for this 37-year-old.

But when the going does get tough, there's always Pepi – Sethi's pet cat – who's his all-knowing Jeeves.

### Macworld's buying advice

Kids should find Sethi great fun, as well as educational. Its music and visuals are impressively evocative, as are the conversations Sethi conducts with sundry

locals. However, the game was blighted by a number of MPEGs that hadn't been translated from the French version. Montparnasse assures me this has been fixed. Let's hope so, or your kids could be in for an unwelcome French class.

**Sean Ashcroft**





## Power-cut life savers

### HiBox

**Manufacturer:** MicroDowell  
(01403 243 333)  
[www.microdowell.co.uk](http://www.microdowell.co.uk)

**Pros:** Compact.

**Cons:** Heavy.

**Min specs:** USB

**Price:** HiBox Stereo (USB HiBox plus HiBox Speakers), £234; USB HiBox, £196 (all prices include VAT).

**Star Rating:** ★★☆☆/6.7

### Mac Dialog 500VA

**Manufacturer:** Riello [www.riello-ups.com](http://www.riello-ups.com)  
**Distributor:** Direktek (01494 471 100)  
**Pros:** Comes with monitoring software.  
**Cons:** Bulky; heavy.  
**Min specs:** USB  
**Price:** £198 (including VAT)  
**Star Rating:** ★★★★★/7.1

**T**he prospect of losing work because of system freezes is unpalatable enough for most people to save as they go along. Some things, though, are beyond our control – power losses and surges, for example. In the worst-case scenario, either of these unwelcome events can result in far more than a couple of hours' lost work: you could be left facing hard-disk damage, RAM-data loss, or fried logic boards.

Such occurrences are rare, but not as rare as you'd think. In early July, the UK

experienced violent electrical storms – just the sort of atmospheric conditions that can affect mains-power supply to a computer. And in offices, power “brownouts” are far from unknown. These are dips in voltage levels caused by heavy-duty equipment, such as lifts, air-conditioning units or compressors, and can cause system crashes.

The only guarantee of regulated power is an uninterruptible power supply (UPS). These hook-up to the mains, and then into your Mac. If mains power fails, your machine won't black-out, because the UPS stores enough energy to keep you up-and-running for up to 30 minutes, depending on your desktop set-up. At the very outside, a UPS will buy you enough time to save any work.

There's really not much to say about UPSs, because they do what it says on the very heavy box. Aware of this, MicroDowell now offers the “world's first multimedia UPS”, the HiBox Stereo. This is no more than a UPS with a pair of 60W speakers, that are to the world of HiFi what a kazoo is to a symphony orchestra.

Lose the speakers, and HiBox is £38 cheaper – and it'll do the job you want. It's cased in rather outmoded transparent Blueberry and Tangerine, and, like all UPSs, weighs a ton.

The Mac Dialog 500VA UPS is much less compact, and cased in an even-more outmoded transparent-Grape plastic. Software is almost superfluous with UPSs, but for what it's worth, the HiBox

comes with a power-monitoring control panel, while the Mac Dialog has software that gives the user a day-by-day log of power activities.

A word of advice: don't place UPS devices on the floor. I did, and – irony of ironies – lost half of this review because I kicked out the cable connecting the UPS to my Mac.

### Macworld's buying advice

If you live in a remote area where the power supply is at the mercy of extremes of weather – or have young children likely to use power flexes as lassos – then a UPS is a sound investment. They also give peace of mind in all other home and office scenarios. There's no qualitative difference between the HiBox and the Mac Dialog. When fully charged, both would've kept my Power Mac G3 running for around 30 minutes.

**Sean Ashcroft**



### Powered up

With MicroDowell's HiBox and Riello's Mac Dialog uninterruptible power supplies, you needn't worry about power cuts.



## Small storage-devices

### Flash USB Drive

**Manufacturer:** USB Innovations  
(01494 794 974)  
[www.usbinnovation.com](http://www.usbinnovation.com)

**Pros:** Portable and lightweight; reusable; no moving parts.

**Cons:** Not supported by default in Mac OS; no OS X support.

**Min specs:** Mac OS 9.x, USB.

**Price:** From £46 (excluding VAT)

**Star Rating:** ★★☆☆/6.5

**T**he Flash USB Drive is tiny (a little bigger than a disposable lighter – 89-x-20-x-8mm), weighs 10g and holds up to 16MB of data. Different capacity models are available, ranging between 16-512MB. I took a test drive with a 16MB unit. Though they are referred to as drives, they are in fact solid-state memory cards, similar to Compact Flash or SmartMedia cards. The difference being that these plug directly into a USB port.

It's been developed primarily for PCs,

so the software CD that shipped with it was for Windows only. Sadly, the unit won't show up until software is installed on Macs – so Macintosh users must download relevant software to each machine they want to use the device with, or burn a CD to carry with the unit. It's a shame – in theory the drive should plug into any USB port and show up on the desktop. It indicates that USB drivers for Flash devices don't ship as part of the Mac OS.

### Driving trouble

The OS 9 drivers can be found on the manufacturer's site, [www.usbdrive.com](http://www.usbdrive.com), as a small 100K download. Another negative is the lack of Mac OS X compatibility. This may change with OS X 10.1, which could have the relevant drivers installed as part of its enhanced support for different categories of USB device – essential to the Mac's role as a “digital hub”.

Once connectivity problems are fixed, the drive shows up on the desktop and can be used just like any other drive. A two-coloured light on the device glows green when connected, or red when data

is being transferred. The side of the device also holds a blue locking switch, like those found on floppy discs, in order to protect against overwriting data. The manufacturer claims a data-retention span of ten years.

### Macworld's buying advice

The flash USB Drive is an exciting technology, that's ideal for road warriors, creative workers or The Sims addicts who want to share neighbourhoods. The lack of inherent Mac USB support for the product is a shame, though.

The other drawback is price – the 16MB unit costs £46, the 32MB £68, and the 512MB unit £792. I think the price of the higher-capacity drives will prevent the product selling widely on initial launch. However, its inherent portability, and theoretical ease-of-use, guarantees that a market will emerge. Once Flash-memory manufacturing ramps up, prices should fall. It's got a lot to offer, but today, this product is for early adopters and international spies only.

**Jonny Evans**



### Size matters

The tiny Flash USB Drive can hold 16MB of data and plugs-in directly to a Mac. However, it costs a little more per megabyte than other solid-state cards – such as SmartMedia.



Sequel to legendary adventure game

## Myst III: Exile

**Publisher:** Presto/Ubi Soft [www.ubisoft.com](http://www.ubisoft.com)  
(01932 838 230)

**Pros:** Beautiful graphics; engrossing story.

**Cons:** Puzzles may be too challenging for many players without outside assistance.

**Min specs:** 233MHz G3; Mac OS 8.1; 64MB RAM; 200MB hard-disk space.

**Price:** £34.99 (including VAT) from September 7.

**Star Rating:** ★★★★★/9.1

I've dreamed about only a few games, and *Myst III: Exile* is one of them.

As I worked my way through it, a few of the puzzles gnawed on me like a hungry Squee munching on barnacle-moss flowers – more on Squees later. Soon after I started this game, solving its puzzles turned into a compulsion.

There are no foes to kill and no dragons to slay – just you, your imagination, and your problem-solving skills pitted against some of the most brain-twisting puzzles imaginable. And it has no specific instructions – as you explore *Myst*, an intriguing story unfolds.

### Past achievement

*Myst* and its sequel, *Riven*, both produced by Cyan, are formidable games. They have sold millions of copies, and are tough acts to follow, but *Myst III: Exile* is a worthy successor. Cyan, having moved on to other projects, handed over the production of *Myst* to Presto Studios, and Ubi Soft is publishing the game.

*Myst III: Exile* shows exquisite production values – the environment is rendered with lavishly detailed images. Travelling through *Myst* and *Riven* was like watching a slide show: rather than moving freely through the landscape, you had to move one click at a time. This is true of *Exile* as well, but you can also look all around with every click.

*Exile* also supports OpenGL-based

graphics, which add nice atmosphere. Ocean waves undulate and roll gently, for example, and as you manipulate objects that reflect or project light, you'll see the whiteout of lens flare. The game features an engaging soundtrack that's thematically linked to the events in the game, so it never plays the same way twice. And if you turn away from a sound source, such as a character speaking, the sound grows fainter.

*Myst III: Exile* picks up the story about ten years after the events in *Riven*. You follow the trail of Saavedro, an old colleague of Atrus, the man who created *Myst*, *Riven*, and many of the other Ages (or worlds) in which the games are set.

Atrus' evil sons devastated Saavedro's own Age, Narayan, and after losing his world, his people, and even his family, he goes mad – all he wants is revenge. You take the role of Atrus' dear friend, here to help Atrus recover the Age of Releeshahn. Saavedro hoped to trap Atrus in his web, but he got you instead. You're always one step behind Saavedro, trying to solve his dastardly puzzles and gather clues about what to do next.

### Story teller

Taking a cue from criticisms levelled *Riven*, Presto carefully unfolds the storyline in bits and pieces throughout the entire game, rather than dumping most of it at the beginning and end. One key to understanding what's going on is Saavedro's manuscript, which he drops page by page throughout the various Ages. You also receive a manuscript by Atrus, which will give you some background on what this author of Ages is doing and why it's so important for you to recover the Linking Book to the Age of Releeshahn, which Saavedro has taken. This process of discovery makes it rewarding to play the game all the way through, since you're always sure to gain enlightenment just around the next bend.

Spread across four CD-ROMs, *Myst III: Exile* is immense, and the puzzles you must solve are challenging. Most of them



involve logic, a bit of computation, or visual perception. Often your challenge will be making sense of what's happening, and then affecting it.

To gain access to one key location, for example, you must build a bridge between yourself and a tower that contains a magical linking book. (Clicking on a linking book in any of the *Myst* games takes you to a different Age.) Constructing the bridge involves figuring out the relationship between Squees – furry, adorable, chirping creatures – the barnacle-moss flowers they like to eat, and the Hearken Fern, a huge plant – and this is one of the easiest puzzles. Though this type of challenge is what makes the game compelling, you may want to pick up *Myst III: Exile, Prima's Official Strategy Guide*, by Rick Barba (Prima Games, 2001), or visit some of the *Myst* fan sites.

Each of the Ages has a unique style and challenges. One deals with energy phenomena – such as electricity – another deals with kinetic forces. In this one – my personal favourite – the puzzles all involve weights and balances.

This challenging game may put off folks who don't have the patience to solve very intricate puzzles. And with four CDs, a fair amount of disc swapping is involved (a DVD version was in the works at the time I wrote this review, but I didn't have the opportunity to test it). Chances are, if you started out this column thinking "Not another *Myst* game," you should move along. For the rest of us, however, it's a thoroughly engrossing experience.

### Macworld's buying advice

Hats off to Presto and Ubi Soft for bringing out what could possibly be the best *Myst* game yet. *Myst III: Exile* brings the franchise to a new level, with sophisticated new effects, panoramic 3D environments, and mind-bending puzzles. Though it's hard – maybe a bit too hard sometimes – ultimately the game is very rewarding. If you liked the first two *Myst* games, consider this a must-have.

Peter Cohen

### No exit?

*Don't take Saavedro too seriously. There is a way out, but it'll take some work.*

## Tricks and tips

*Mystified? Try your hand with these tips and tricks.*

■ *Myst III: Exile* doesn't waste any opportunity – if you can interact with an object, chances are it's a key to one of the puzzles.

■ Read Atrus's and Saavedro's journals carefully. They will give you insight into each character. Look carefully for the pages Saavedro has dropped, too – they're easy to miss.

■ Note that the control mechanisms used by the telescopes in the J'Nanin observatory are the same as the controls you'll find inside some tusks.

■ As you solve puzzles in Amateria, note the hexagonal designs and colours on top of the control panel covers. They're important in gaining access to the tower and activating what's within.

■ The puzzles on Edanna are among the trickiest, because they're based primarily on natural forces that interact in subtle ways. Pay careful attention to the effects of light and water on Edanna's flora, and note that some of it can reflect and channel light.



Apple updated its desktop Macs at New York's Macworld Expo in July. Instead of wholesale changes, it opted for speedier processors and some silver case designs.

By Simon Jary



# Greys scaled

**T**he pre-show rumours heralded a total revamp of the iMac range for consumers, alongside gigahertz G4 processors at the high-end. But when Apple CEO Steve Jobs walked off the stage after his opening keynote address at July's New York Macworld Expo, the changes to Apple's hardware line-up were relatively minor. While every single desktop Mac – except the now “suspended” G4 Cube – got faster and more capacious, and most colour schemes got a refresh, the fundamentals remained the same.

Apple's phenomenally successful iMac range now starts at 500MHz and tops-out at 700MHz. And the controversial Blue Dalmatian and Flower Power patterns released at February's Macworld Expo in Tokyo have been dumped in favour of last year's Indigo, Snow and Graphite case colours.

The professional desktop Power Macintosh G4 line-up now has a maximum speed of 867MHz, and an even faster performing dual-800MHz system. What was last month's top-end processor speed (733MHz) is now the powerhouse behind the entry-level Power Mac – representing a £900 price-cut. And all Power Macs now boast silver-ish cases, with new front drive bezels and clearer see-through plastics.

▶ page 72





Pro desktop Macs

## Power Mac (733MHz)

**Manufacturer:** Apple  
(0800 039 1010)

[www.apple.com/uk](http://www.apple.com/uk)

**Pros:** CD-RW drive; 40GB hard drive; 32MB NVidia GeForce2 MX video card; iMovie 2; iTunes 1.1; iTools; OS 9.1 and OS X.

**Cons:** Lacks other models' Level-3 backside cache; iDVD requires internal SuperDrive, so you can't add such support later.

**Price:** £1,199 (ex. VAT)

**Star Rating:** ★★★★★/8.7

## Power Mac (867MHz)

**Pros:** Fastest single-processor system; SuperDrive (DVD-R, CD-RW); massive 80GB hard drive; 32MB NVidia GeForce2 MX video card; Level-3 backside cache; iDVD; iMovie 2; iTunes 1.1; iTools; OS 9.1 and OS X installed.

**Cons:** RAM limited for such a fast system at this price.

**Price:** £1,799 (ex. VAT)

**Star Rating:** ★★★★★/8.6

## Power Mac DP (800MHz)

**Pros:** Two processors speed Photoshop and other optimized applications, as well as Mac OS X; SuperDrive (DVD-R, CD-RW); 64MB NVidia GeForce2 MX video card with TwinView; 60GB hard drive; 256MB RAM; Level-3 backside cache; iDVD; iMovie 2; iTunes 1.1; iTools; OS 9.1 and OS X installed.

**Cons:** Multiprocessing advantages limited to Mac OS X and only a few applications at present.

**Price:** £2,499 (ex. VAT)

**Star Rating:** ★★★★★/8.8

As Apple's professional desktop workstations mature, it's only right that they should turn silver, and of course get faster. If you bought Apple's 733MHz system before July 18, you'll be wincing because the CD-RW model that used to cost £2,099 (ex. VAT) now retails as the £1,199 entry-level model in what Apple is calling its "second-generation" Power Macintosh G4.

It's not quite that bad – the 'old' high-end 733MHz G4 had a 60GB hard drive and 256MB of RAM, compared to this new 733MHz model's 40GB disk and 128MB of RAM. But in the speed stakes it is easily eclipsed by the new fastest single-processor system at 867MHz, and blown away by today's top-end dual-G4 800MHz monster (see tests).

### Silver dream machine

The most noticeable physical difference between these new G4 systems and the models they replace is Apple's new "silver" livery. The basic case design remains largely untouched, but the Graphite front, top and rear panels are now a smooth matt silver. What was once blue-grey is now white-grey. Take a look at the side panel of the older Graphite Power Mac for a decent idea of the new colour scheme. This side panel remains the same, except for a lighter Apple logo. Curiously, the Apple logo on the front panel has now gone altogether.

The handles and corresponding feet are now completely see-through, losing the previous model's under-ridges. The drive bevels are now flush with the front-panel – you open the CD-RW or SuperDrive with the Pro Keyboard's media-eject key. The second drive bezel is for the optional 250MB Zip drive (£70 extra).

Another striking case change is the new grille-less built-in speaker, which looks vulnerable to puncture if you're in the habit of sticking biros in places they shouldn't go. I gave it a good few jabs with my finger, and it seemed untroubled – so this criticism may be slightly pedantic. However, you'd be wise to protect it from inquisitive children.

That said, the new speaker does sound a lot better than the Graphite G4's – louder and richer, with a far-more effective bass particularly noticeable.

Round the back, expansion is unchanged. There are still four PCI slots, two FireWire and USB ports, 4x AGP, and Gigabit Ethernet as standard on all systems. FireWire still maxes at 400Mbps, and it has 12Mbps USB – not the faster but less prevalent USB 2.0.

The logic board is also the same as with the previous G4s, with a 133MHz system bus, and three PC133 DIMM slots – for a maximum 1.5GB of memory. And you can still add up to two internal ATA drives or three internal SCSI drives – for a potential 224GB capacity (two 72GB Ultra160 SCSI drives running at 10,000rpm, plus an 80GB ATA at 7,200rpm) via build-to-order.

The 733MHz model's 40GB hard drive (5,400rpm) runs slightly slower than the others' (7,200rpm) – another reason why the 800MHz DP and 867MHz G4 register faster performance scores.

### More for your money

While internal and external expansion are unchanged, the built-in components do benefit in this new line-up.

As stated earlier, the entry-level system (up from 466MHz) has the same 733MHz G4 as the previous high-end model, and a 40GB hard drive instead of the old low-end's 30GB disk. All Power Macs now feature the superior GeForce2 MX from Nvidia, which packs 32MB of video RAM.

The mid-range Power Mac sports the fastest single-G4 chip, at 867MHz, and boasts a 60GB hard drive. The new top-performance system packs two 800MHz G4s, and has an 80GB disk. Both of these models feature the same 256K of level-2 cache as the 733MHz model, but add a further 2MB of backside level-3 cache. Cache is used to store frequently used data for super-fast access. Built-into the



chip, backside cache is the very fastest cache, supplying data to the processor in an instant. The generous 2MB of backside cache makes a noticeable difference in performance when you most need it. The 733MHz is fast, but whipped into place by the L3 cache of the two other systems (as well as by their faster chips and hard drives).

The 867MHz and 800MHz DP models both feature Pioneer's combination DVD-R/CD-RW SuperDrive, which – combined with the superb bundled iDVD program – will burn DVD discs that will play on domestic DVD players. Apple also showed a preview of iDVD 2 at Macworld Expo. This update (a £15 CD upgrade for iDVD owners) has compression functionality that allows for 90-minute DVDs – a 50 per cent increase on iDVD's previous limit. For more details on iDVD 2, see page 22.

Apple claims that the 800MHz DP encodes DVD faster than real-time – meaning that you could encode an hour-long DVD in under 60 minutes. Previously, Apple promised only 2 x real-time encoding. Windows PCs, however, take at least 25 x real-time...

Taking the dual part of its name to the next logical step, the 800MHz DP's graphics card features twice the video RAM as the other models' GeForce2. Its TwinView technology lets you connect both a new Apple display and a VGA display, without requiring an additional graphics card. Due to the proprietary nature of the Apple Display Connector (ADC), the only way that you can run two or more Apple flat-panel LCDs is by buying a DVlator adaptor from Dr Bott ([www.drbot.com](http://www.drbot.com)) with an extra DVI-based video card, such as ATI's Radeon.

### Software

Although I wouldn't recommend moving to Mac OS X before September's release of version 10.1 (see News, pages 20-21), it's great that Apple pre-installs its next-generation operating system with all of its Macs these days. OS 9 is also installed as the default system for now – so you can choose when to move to the more modern system.

Of course, all these Macs come with iMovie 2 for digital movie-editing and iTunes 1.1 for managing and listening to MP3s and burning audio CDs. All Macs ship with

### Power Macintosh G4: second-generation models

Model	Price ex. VAT	PowerPC G4 processor	Cache L2/L3	Base RAM	Max RAM	Hard disk	CD DVD	USB ports	Fire Wire	PCI slots	Ethernet	56Kbps modem	Graphics card
Power Mac G4	£1,199	733MHz	256K/0	128MB	1.5GB	40GB (5,400rpm)	CD-RW	2	2	4	10/100/1000	Yes	32MB NVidia GeForce2 MX
Power Mac G4	£1,799	867MHz	256K/2MB	128MB	1.5GB	60GB (7,200rpm)	DVD-R/CD-RW	2	2	4	10/100/1000	Yes	32MB NVidia GeForce2 MX
Power Mac G4 DP	£2,499	2 x 800MHz	256K/2MB	256MB	1.5GB	80GB (7,200rpm)	DVD-R/CD-RW	2	2	4	10/100/1000	Yes	64MB GeForce2 MX w/TwinView

Microsoft's Internet Explorer and Outlook Express, as well as a bunch of other utility software. In addition, the SuperDrive models ship with iDVD.

### Speed tests

As you can see from our speed tests below, the silver 867MHz Power Mac G4 is some 17 per cent faster overall than the previous Graphite 733MHz Power Mac. This is impressive, but look at the scores of the old dual-processor 533MHz Power Mac – for users of Photoshop and other multiprocessing-optimized applications, such as Cinema 4D XL, the dual-chip 800MHz model (unavailable for testing at press time) will be the real winner. If you're wondering why the DP model loses out at RGB to CMYK conversion, that's because multiprocessing doesn't help at all, and megahertz is everything.

### Macworld's buying advice

Although a lot faster, the new silver systems aren't different enough to live-up to Apple's hype of them as the "second generation" of Power Macintosh G4. However, Apple has managed to impressively increase the performance and component capability across the range – while keeping entry-level to high-end prices the same.

If you want to use Apple's highly capable iDVD application, you'll need either the 867MHz or 800MHz model. As iDVD and the forthcoming iDVD 2 work only with the Mac's internal SuperDrive, it isn't possible to later add an external, third-party DVD-R drive to the new 733MHz Power Mac. (Apple's £680 DVD Studio Pro does work with external DVD-R drives, however.)

But if creating your own DVD discs doesn't appeal, the low-end model is impressive. The lack of a backside cache and slightly slower hard drive are a drag, but £1,199 is a small price to pay for a system that runs on last month's top-rated G4 chip. The built-in CD-RW drive will satisfy most of us.

While it's nice to have the fastest-rated G4 in terms of megahertz, and the 867MHz Power Mac represents a sizable performance leap from the 733MHz system, its single processor holds it back. The extra 134MHz of grunt doesn't hurt, of course, and the backside cache promises real time-savings – but the extra £600 is only worth paying if you require (or might soon need) the DVD-R SuperDrive. If DVD's your thing, but not Photoshop, this model's a corker.

### Mac OS 9.2: silver service only



Apple has now got three operating systems going at once! Most new Macs ship with both Mac OS 9.1 and Apple's next-generation operating system Mac OS X pre-installed, with 9.1 the default system. The new G4 Power Macs, however, ship with OS X and OS 9.2 – which, according to Apple, doesn't work with any other systems. As if the possibilities of OS X aren't confusing enough for users, the proprietary nature of silver-only 9.2 can only produce more head-scratching. Silly. Expect Apple to roll-out 9.2 for all G3 and G4 Macs before September, because Mac OS X 10.1 (pages 20-21) requires it.

But the top-end multiprocessing 800MHz DP Power Mac G4 is a real bruiser when it comes to knocking-out processor-intensive payload. When you move to Mac OS X, you'll be glad you picked the dual-processor option. And users of Adobe Photoshop and Cinema 4D, among a few others, will get immediate gratification from the two chips working side by side.

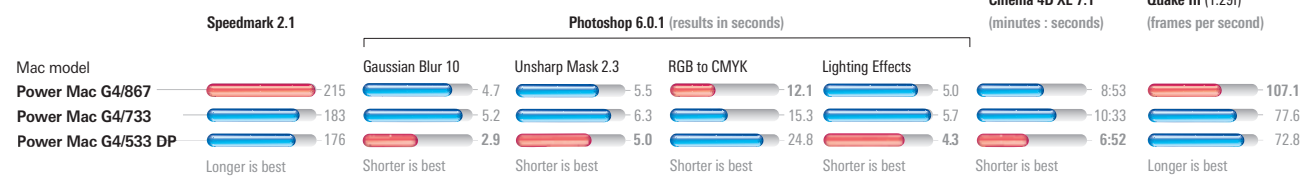
The 733MHz and 867MHz Power Macs are available now; the dual-800MHz model will ship by the end of August, according to Apple.

▶ New iMacs on page 74



## Quicksilver: 17% faster overall, but multiprocessing still best at Photoshop

Best results in test.



Speedmark 2.1 scores are relative to an iMac 350MHz (1999), which is assigned a score of 100. We tested each system with a default system disk cache; displays set to 1,024-x-768 pixels and 24-bit colour; and Virtual Memory enabled except for Photoshop. We tested the 867MHz computer with Mac OS 9.2 (not publicly available) and 256MB of RAM (it ships with 128MB of RAM). The reference systems were tested with 256MB RAM and OS 9.1. The 733MHz Power Mac is a Graphite model, not the new entry-level silver model. We tested Quake III v1.29f at a resolution of 640-x-480 pixels, with graphics set to Normal using converted timedemo 1. Macworld Lab testing by Jason Cox and Ulysses Bravo.





Consumer Macs

iMac (CD-ROM; 500MHz)

Manufacturer: Apple (0800 039 1010) [www.apple.com/uk](http://www.apple.com/uk)

Pros: Least expensive; iMovie 2; iTunes 1.1; iTools; Mac OS 9.1 and OS X installed.

Cons: You'll need to add more RAM; video memory also compromised; available in Indigo only.

Price: £799 (inc. VAT)

Star Rating: ★★★★★/8.6

iMac (CD-RW; 500MHz)

Pros: CD-RW drive; iMovie 2; iTunes 1.1; iTools; Mac OS 9.1 and OS X installed.

Cons: Not as cheap as in US; unavailable in Graphite.

Price: £999 (inc. VAT)

Star Rating: ★★★★★/8.7

iMac (CD-RW; 600MHz)

Pros: CD-RW drive; 256MB RAM; 40GB hard drive; iMovie 2; iTunes 1.1; iTools; Mac OS 9.1 and OS X installed.

Cons: Unavailable in Indigo.

Price: £1,199 (inc. VAT)

Star Rating: ★★★★★/8.8

iMac (CD-RW; 700MHz)

Pros: Fastest iMac; CD-RW drive; 256MB RAM; 60GB hard drive; iMovie 2; iTunes 1.1; iTools; Mac OS 9.1 and OS X installed.

Cons: Unavailable in Indigo.

Price: £1,299 (inc. VAT)

Star Rating: ★★★★★/8.7

Look-away now if you were expecting a new-look iMac with flat-panel LCD screen, and maybe even a G4 processor. The iMac looks just like it did a year ago – its 15-inch CRT display encased in an Indigo, Snow or Graphite case. But don't be disappointed – these new, faster G3 iMacs are still as easy to set-up and use as any LCD iMac would have been. With some of the finest consumer software available bundled for free with the iMac, no PC – whether even a 1GHz model – is as capable as the iMac at making novice computer users masters of the digital age.

There's not much difference between these new iMacs and the iMacs that preceded them, except in processor speed and case colour. The entry-level iMac now runs at 500MHz instead of 400MHz, and the top-end model at 700MHz instead of 600MHz. The crazy Blue Dalmatian and Flower Power patterned plastics have been given the heave-ho in favour of a return to the all-white Snow colour – which matches the new iBook released a month or so ago.

Four models on offer

**£799** The entry-level iMac costs £799 (including VAT). That's a great price for a bundle that includes FireWire connections, as well as iMovie 2, iTunes 1.1, and AppleWorks 6.2 software – plus games, such as Cro-Mag Rally, Bugdom and Nanosaur. (See below for more on bundled software.)

The 500MHz G3 processor is easily speedy enough for all those applications, and could also handle heavyweights such as Adobe Photoshop if you wanted it to.

It does have limitations, but these may not matter to you, and can be eliminated later for a couple of hundred pounds-worth of third-party extras. First, the 64MB of RAM is stingy. It's not enough to sensibly run Apple's next-generation operating system, Mac OS X, and will soon annoy you if you use more than email. An extra 64MB of RAM from Apple will cost you £79 pre-installed, but you can buy it much cheaper from other outlets (such as the online [www.crucial.com/uk](http://www.crucial.com/uk)) for as little as £11. For the sake of novices, Apple should have eaten such a tiny cost, and shipped with 128MB from the start.

The £799 iMac also ships with a CD-ROM drive instead of a rewriteable (CD-RW) drive. If you're never going to burn a CD, that's fine – but I believe that the iMac's ability to draft you into the boundless possibilities of the digital world will soon have you wishing you could burn CDs. Again, if it's email and Web only that you want, the lack of a CD-RW is no biggie. And you can add a speedy external CD-RW for less than £200, if you find you want to later.

There's a little less video RAM with the £799 iMac. Internet and email users won't notice the difference, and

nor will those people who use the word processor, spreadsheet or database programs. Avid gamers, on the other hand, should consider at least the next model up.

The only other limitation is the single colour option – the marvellous Indigo. You can't chose a Graphite or Snow colour scheme at this price.

**£999** For an extra £200, you get one extra colour choice (Indigo or Snow), a CD-RW drive, 128MB of RAM for starters, and that extra squirt of video RAM that'll speed-up your gaming. If you're sure you don't need a CD-RW, get the £799 iMac and buy the extra RAM separately (but not from Apple). If you do want to enjoy the benefits of burning your own CDs – for music compilations, data archiving, or sending files to other computer users – the built-in, slot-loading drive in most of the iMacs is neat and inexpensive. **£1,199** Another £200 gets you the 600MHz iMac, with a hard drive twice as large as the £799 and £999 models, and a whopping 256MB of RAM.

The extra 100MHz of processor power is welcome, but of little consequence to those who want an iMac for general email, Web use and word-processing. The larger hard drive, however, will make all the difference if you plan on editing your own digital home movies. The less-expensive models have a 20GB hard drive, which is plenty big enough for most people, but could get a little cramped when editing large projects in iMovie. This 40GB drive should be the answer for all budding Guy Richies.

The big chunk of pre-installed RAM is great, as it's often lack of memory that causes computer crashes. It means that you'll be able to keep more programs open at the same time, and assign more RAM to each – allowing you to work faster and safer.

**£1,299** The top-of-the-range iMac notches the revs to 700MHz. This will speed-up activities such as encoding your iMovies to QuickTime, but the extra oomph isn't going to be noticed by most consumers. As with the £1,199 iMac, hats off to Apple for pre-installing a healthy 256MB of RAM. The 60GB hard drive is simply capacity heaven, too.

Software and extras

On top of the usual Web browsers, email clients, fax software and Palm utilities, the iMac comes with a bunch of great software. Apple's iMovie is without doubt the easiest way to make great-looking digital home movies. As all these iMacs have FireWire connections, all you need to add is a digital camcorder to get underway. Buy a camcorder with FireWire (also known as iLink, or IEEE 1394), and both DV-In and DV-Out. Some cameras have only DV-Out, although there's a £50 widget ([www.datavision.co.uk](http://www.datavision.co.uk)) to add DV-In for most. You need DV-In so that you can keep your edited

iMovies on MiniDV tapes or export to standard VHS. This makes showing your movies a lot easier, and will save having to keep all those big files on your hard drive. If you want your iMovies on DVD, you need one of Apple's professional desktop Power Macs, with a DVD-R SuperDrive and the bundled iDVD (see pages 72-73).

AppleWorks – which comes free with all the iMacs – is a suite of business applications, including a word processor, spreadsheet, database and low-end graphics tools. It's fine for most people, but if you have to swap such files with Windows PCs, you'd be better off using Microsoft Office – which costs about £400 for Word, Excel (spreadsheet), PowerPoint (presentations) and Entourage (more powerful email client than the bundled Outlook Express). You can also buy Word and Excel separately for less.

You're also likely to want a printer, and other peripherals such as a scanner (see page 77) and maybe a digital camera. See *Macworld's* Star Ratings Buyers' Guide (from page 163) for our recommendations.

One benefit that all these iMacs (bar the £799 model) enjoy over those available in the US is a special software collection, featuring a Tomb Raider game, SimCity 3000 and Escape from Monkey Island, as well as a whole bunch of reference and learning CDs.

Macworld's buying advice

While not boasting LCD screens and G4 processors, these iMacs are easily powerful enough for handling even heavyweight applications. Each represents value for money, so your choice should come down to what you need to do with your iMac now, and what you'd like to use it for later.

The entry-level iMac is sure to appeal on price, but its lack of RAM is a rather silly move by Apple – forcing novice computer users to order more memory and install it themselves. Memory installation is pretty easy on these iMacs – as it is with all modern Macs – but for the sake of a tenner, Apple has created what many potential buyers will see as a problem. If Apple is sticking 256MB of RAM in the two high-end iMacs, why is it deliberately sabotaging the chances of this otherwise attractive model?

I can see the merits of offering a CD-ROM model to keep costs down, though. Remember that you can add an external CD-RW drive at a later date. The £999 iMac that does have more RAM onboard and a CD-RW is likely to appeal to the more adventurous on a budget. One gripe: this model costs \$999 in the US – that's just over £700. Rip-off Britain? Think different, Apple UK.

The larger hard drives and extra RAM make the £1,199 and £1,299 iMacs the best choices for owners who want to use their iMac to its full potential, with iMovie especially. Is the top-end iMac's extra 100MHz worth the extra £100? Probably not, but the 60GB hard drive could prove useful – although the 40GB hard drive is also impressive.

Apple will one-day change the iMac's design. That could happen in a few months, or it might not happen for a year. In the meantime, this latest line-up is full of winners.

Apple UK would surely sell a lot more iMacs if it looked to the US for more attractive pricing, but even at these prices the iMac still represents real value-for-money.

All are available now, except the 700MHz iMac, which will ship by the end of August, according to Apple. **MW**



Is this the back of the CRT iMac?

The iMac is Apple's most successful computer ever. Its technical and design innovation revitalized the then ailing company, and only the Taliban remained untouched by its new-look styling. From its birth in 1998, the iMac has been the leader in attracting new consumers to personal computing.

Three years is a long time in computing, however. The colours have changed from Bondi Blue to Blue Dalmatian and back to Indigo – but, in that same time frame, Apple has taken its 'i' concept and transformed video-editing with iMovie, digital-music with iTunes, and easy Web-page creation with iTools.

Yet, the iMac itself hasn't changed much at all. The addition of FireWire in 1999, and slot-loading CD-RW in 2001 have moved the concept further. But the basic shape and 15-inch screen are still vintage '98.

For over a year now, the Apple-industry rumour mill has churned out "leaked specifications" and phoney pictures of Apple's "new iMac". Everyone expected it to be unveiled at July's Macworld Expo. But there wasn't a peep.

The "new iMac" supposedly forgoes the 15-inch cathode-ray tube display for a neat LCD flat-panel screen, like Apple's Studio Display range. Think see-through, think sexy, think... as much as you like, because it ain't out yet. And knowing Apple, the next iMac won't look anything like what we're expecting.

Apple is unlikely to launch a flat-panel iMac into today's depressed PC market unless it can get the price down to current affordable levels. And the story of the over-priced G4 Cube is a chilling example of what can happen to superbly designed computers mismatched with their target audience. Apple simply cannot afford to risk its best-selling brand at a time when PC sales are dying.

There will be a new iMac, but only when Apple is ready to ship it at the right price and into a waiting market – this may be as late as January 2002.

In the meantime, with iMovie, iTunes, and iTools, Apple has proved that it's not what the computer looks like that really matters – it's what it allows you to do. The new iMacs let even novices not only browse the Web within minutes of taking the iMac out of its box, but create their own Web sites. They can edit great-looking digital home movies and send them across the world for friends and family to marvel over. They can compile digital music collections and burn CDs. With an iMac, ordinary people can (and do) produce extraordinary stuff.

A flat screen would be nice, but it's not essential. **MW**



# Scan-able lecture

Consumer scanners tested and rated

By David Fanning



Over the past few years, scanners have gone from being highly technical instruments used by experts, to gadgets used by virtually everyone with a home computer. The most obvious reason for this is price: scanners now start at under £50 – five years ago, you'd be looking at ten times that sum. Retailers now routinely bundle low- to mid-range consumer scanners with new computers as part of extra-value deals. This has put some capable scanners in the hands of millions of home users, so ease of use is paramount.

The scanners on test here all fall into the sub-£150 category, and most are claimed to be easy to use. We've assessed what bang for your buck each model gives you in terms of features, as well as highlighting technical aspects you should be aware of when choosing a scanner.

## Interface

Whichever model you choose, it needs to work with your computer. Apple made USB its interface of choice when it launched the iMac three years ago. All the scanners tested here use USB – except Umax's Astra 6450, which has a faster FireWire connection. If your Mac doesn't have FireWire, the Astra is not for you. If using a Mac without USB, then you'll need to change your Mac before buying a new scanner.

## New resolution

In the past, companies harped on about their "fantastic 24-squillion dots per inch resolution". Warning: whenever you see a scanner under £150 offering more than 1,200dpi, be sure to check the small print. Though less common today, companies still print interpolated resolutions on the box. Interpolation is when you add dots to an image, so that if you doubled the number of



### Agfa SnapScan e20

Despite being named after the nightclub in *Eastenders*, the e20 does a fabulous job of scanning. For about the price of a good night out (£55), the e20 will take care of just about any scanning task – from DTP to OCR. This is due to the excellent suite of included software – with Read Iris for OCR, and Corel Print Office for home DTP. A couple of omissions set this model apart from the more expensive ones: it doesn't have a front-panel button control, or a back-light for scanning transparencies. However, if you just need basic scanning, with simple-to-use software, then the e20 fits the bill. Beginners may want to spend a few extra bob for front-panel controls. Otherwise, the e20 is a bargain.



### Agfa SnapScan e25

Big brother to the e20, the e25 offers much the same ease of use and specifications, but with a few extras thrown in. The additional £10 that the e25 costs is well worth it. For this, you get three-button control, which allows for scanning directly into email or graphics packages. It also shares a similar design to the e20, and has the same swappable translucent lid-handle, so you can match it with a Graphite, Tangerine or Grape iMac. The other thing that distinguishes the e25 from the e20 is its additional colour-depth. It has 42-bit depth, compared to the e20's 36-bit. This gives more detail in image highlight and shadow areas, adding to picture quality.



### Artec Ultima 2000

This model is the cheapest on test by £4 from the Umax Astra 3400, which it fails to compete with on image quality, ease of use, or software. It's commendably thin – being powered by USB – but it rendered blues too thinly and reds too heavily. It's also slow. Although Adobe PhotoDeluxe is always useful, the TextBridge OCR software refused to recognize our TWAIN setup, so we couldn't use it. Also, TextBridge clashes with all Mac OSs, but because there's no Read Me file warning of any such problem, we took it to be an extension clash, and set about isolating the problem. Much later, we found mention of the OS clash – and the solution – buried in Artec's printed documentation. User friendly? Er, no.

Company	Agfa
Colour depth	36-bit
Transparency adaptor	No
Resolution	600-x-1,200dpi
Software	Corel Print Office, Read Iris OCR, ScanWise
Price	£55
Contact	Agfa, 020 8231 4903

Value	■■■■■■■ 9
Ease of use	■■■■■■■ 9
Software	■■■■■■■ 8

Star Rating ★★★★★/7.9

Company	Agfa
Colour depth	42-bit
Transparency adaptor	No
Resolution	600-x-1,200dpi
Software	Corel Print Office, Read Iris OCR, ScanWise
Price	£65
Contact	Agfa, 020 8231 4903

Value	■■■■■■■ 9
Ease of use	■■■■■■■ 9
Software	■■■■■■■ 8

Star Rating ★★★★★/8.2

Company	Artec
Colour depth	36-bit
Transparency adaptor	No
Resolution	600-x-1,200dpi
Software	TextBridge Classic 3.0 OCR, PhotoDeluxe 2.0
Price	£45
Contact	New Century, 020 8902 6789

Value	■■■■■■■ 7
Ease of use	■■■■■■■ 5
Software	■■■■■■■ 4

Star Rating ★★★/5.2



### Canon N650U

The sleek N650U lacks the silver casing of the more expensive models. Despite its comparative sombreness, the N650U tackles the job of scanning well enough. It sports a single button to launch CanoScan Toolbox, a simple scanning interface to access supplied software, and also includes OmniPage and PhotoStudio from ArcSoft. The CanoScan Toolbox has three more buttons, which you can assign to launch other software. However, due to a bug, they don't work. I even highlighted this software flaw in a similar feature last year, but it remains unfixed. Shame on you. Despite the software quirks, it's still a pretty good deal.

Company	Canon
Colour depth	42-bit
Transparency adaptor	No
Resolution	600-x-1,200dpi
Software	PhotoStudio 2000, OmniPage OCR, PhotoBase
Price	£69
Contact	Canon, 0121 680 8062

Value	■■■■■■■ 7
Ease of use	■■■■■■■ 8
Software	■■■■■■■ 6

Star Rating ★★★★★/7.2



### Canon N1220U

At the other end of the Canon range is the N1220U. This model has included all the big guns in Canon's scanner armoury. The most obvious difference is its striking and classy-looking silver-grey case. But at £149, this is at the expensive end of the consumer-scanner market. The N1220U's specifications are much higher than its cheaper sibling. For example, it's 42-bit, rather than 36-bit. The resolution is also higher, at 1,200-x-2,400dpi, meaning it's better for enlarging small images – though the lack of a transparency adaptor is a shame. It does, however, have the same software as the cheaper Canon models, and is only worth the extra if you will make use of its additional features.

Company	Canon
Colour depth	42-bit
Transparency adaptor	No
Resolution	1,200-x-2,400dpi
Software	PhotoShop 5.0 LE, PhotoStudio 2000, OmniPage OCR
Price	£149
Contact	Canon, 0121 680 8062

Value	■■■■■■■ 6
Ease of use	■■■■■■■ 8
Software	■■■■■■■ 7

Star Rating ★★★★★/8.0



### Epson Perfection 640U / Photo

Although it doesn't have the high resolution of the 1240U, the 640U does claim a resolution of 600-x-2,400 pixels – yet this doesn't tell the whole story. Because the company has quoted vertical resolution (see "New Resolution" in the main text) this means it may have edged the scanner head across an image slowly, to take more samples. This gives a higher figure, but won't improve overall quality. A vertical resolution double that of the horizontal resolution is acceptable – but four times greater, as claimed for the 640U – is a tad cheeky. That said, the 640U did well, and offers top software integration – making it an excellent choice for the price. For an extra £89, the 640U Photo will give you a transparency adaptor.

Company	Epson
Colour depth	36-bit
Transparency adaptor	640U Photo only
Resolution	600-x-2,400dpi
Software	PhotoDeluxe, Photo Printer, Panorama Maker, Presto! OCR, £99 (640U); £188 (Photo)
Price	£99 (640U); £188 (Photo)
Contact	Epson, 0800 220 546

Value	■■■■■■■ 7
Ease of use	■■■■■■■ 10
Software	■■■■■■■ 8

Star Rating ★★★★★/8.0

## Product scores

Bar-chart quality scores run from 0-10, and reflect specific aspects of performance. Star Rating is an overall score, encapsulating these individual scores, plus any other factors relevant to your choice of purchase.

dots in a 300dpi scan, you'd get a document of 600dpi, but without any extra detail. Interpolation is therefore worthless, and any company that quotes interpolated resolution should be avoided.

Scanner manufacturers quote two numbers for resolution – horizontal and vertical. Horizontal resolution is the smaller of the two, but the most important. This is because it's determined by the number of CCDs (Charge Couple Devices) on the scanning head. Vertical resolution is determined by the number of steps the scanner-head makes while scanning a page. It's no big deal to get a scanner to take more samples as it sweeps the page, but this doesn't mean better picture quality.

Resolution is a valid specification to quote, as long as it isn't an interpolated figure. But how much do you need for good

quality results? Well, for almost everything you'll be scanning, 300dpi is plenty.

At *Macworld* all the pictures you see in the magazine are 300dpi. The same goes for most other magazines. If printing to an inkjet – regardless of brand – then you're unlikely to need to go above this, unless enlarging an image. If this is the case, then a resolution of between 600-1,200dpi will be needed. If blowing something up to more than four times its original size, then you may have to look at more expensive scanners.

However, before throwing a couple of gees at a high-end flatbed scanner, consider how often you're likely to be doing ultra high-res work. The chances are, you can survive with a lower-end model and send the odd large-image job to a repro house for pro scanning.

## Interface

Until recently, the sole reason for buying a consumer scanner would be as part of a desktop-publishing suite. Now, there are far more applications for them – primary among which are scanning images for Web use and scanning documents for OCR (optical character recognition) processing.

The rule of thumb with today's scanners is the more automated, the better. Whether you're a Mac guru or rookie, single-button simplicity is still a plus. I may be quite comfortable using professional-level drum scanners, but there's still no substitute for pressing a button that allows you to scan, crop, size, and send an email with a picture attachment. A scanner with such worthwhile software support and front-panel control buttons is worth paying that

## Resolution resolved

For online images, you should usually scan at 72dpi, which is the default screen resolution.

Outputting to any kind of printer will require a resolution of 300dpi. Even if your printer is capable of printing at resolutions over 2,000dpi these dots do not relate directly to the dots you have scanned in. Each pixel (picture element) is made up from a number of ink droplets. In some cases, these droplets are of varying sizes. So, if you want to place a single pixel on a page, it

isn't the same as a single droplet of ink. Estimates vary on what the native pixel-resolution is for inkjet printers. However, this is unlikely to be far off 300dpi.

Another factor relevant to optimum scanning resolutions is that CCD (Charge Couple Device) arrays are arranged in multiples of 300 per inch, so it's safest to scan in at 300dpi. If you scan in at an odd number, such as 288dpi for example, you won't be using every CCD. The result is that fine vertical lines could disappear.

																																																		
<h3>HP ScanJet 5300c</h3> <p>The ScanJet is barge of a scanner compared to the svelte Canon machines. But this ugly duckling does promise some interesting functions, such as Scan to Web. Unfortunately, the software is flaky. We did get most of it working in the end, but the problem was part of the driver software had been installed in the Extensions Disabled folder, so refused to work until placed in the Extensions folder.</p> <p>The Scan to Web feature allows you to upload pictures to an HP Web site called Cartogra (<a href="http://www.cartogra.com">www.cartogra.com</a>). This makes it possible to set up an iTools-like Web gallery of pictures. This has the potential to be a good scanner, but software issues hold it back. For the cash, you may want a scanner that works out of the box.</p>	<h3>Microtek ScanMaker 3700</h3> <p>Microtek has been making scanners for the Mac since the 1980s, and still offers a huge range to choose from. The ScanMaker 3700 has all the push-button controls you should expect from a modern scanner. It has all the required software, including PhotoDeluxe (for image editing) and OmniPage (for OCR work). It also offers ScanWizard 5 scanning software, which has all the hallmarks of being designed by a scan-technology er...wizard. It's both easy to use and, in the hands of an expert, extremely capable. It guides you through choices step by step, or allows you to manage settings if you know what you're doing.</p> <p>Although the 3700 is well designed enough not to look out of place next to an iMac or Cube, it is rather bulky.</p>	<h3>Microtek ScanMaker 4700</h3> <p>To all intents and purposes, the 4700 is identical to the 3700, but with extra resolution of 1,200-x-2,400dpi. It doesn't come with a transparency adaptor, but it does support one if you want to buy it separately. The high resolution is ideal for use with transparency scanning.</p> <p>The software bundle is the same as the 3700's (PhotoDeluxe, OmniPage and the excellent ScanWizard).</p> <p>If you already have a copy of Photoshop, you can use the ScanWizard plug-in to import images directly into the application.</p> <p>If you need the extra resolution, then choose this model over the 3700. If you don't need to scan slides or enlarge images, then save a bit of bunce by buying the other model.</p>																																																
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bit extra for. The great news is that, because scanners with these features are designed for consumer use, economies of scale mean prices have become encouragingly low.

## Colour performance

Colour accuracy is always an issue with scanners, and – although less important with low-end models than with the high-end ones used by graphics pros – it still matters. We did come across poor colour accuracy with some of the scanners on test, but this wasn't a hardware problem, but rather a case of the software trying too hard to be helpful.

If you scan a document that comes out looking wrong, check the settings. It's almost certain that you've picked the wrong option, or the settings are set by default to do something else.

However, certain hardware specifications do affect colour performance. Bit depth, for example, refers to the amount of colours a scanner can see, but some models scan at a higher bit-depth than others. Most of the scanners tested have a bit-depth of 36, but others use 42-bit colour. However, this is only an internal scale, and the actual bit-depth on output is lower. The theory is that the scanner picks the best colour palette for each scan, giving more detail to an image's highlights and shadows.

## Speed

When scanners took 15 minutes per pass, speed was an important issue. But now that most of them can quite comfortably scan an A4 document in under one minute, the time factor is less critical. The Umax Astra 6450

design

buying advice

specs

score



### Umax Astra 6450 / 6400

The Astra 6450 (pictured) is the only scanner on test that uses FireWire rather than USB. Umax chose FireWire to ensure there's no data-transfer bottleneck from scanner to computer. We were able to scan a full A4 page at 300dpi in less than 30 seconds.

The software includes Adobe Photoshop LE 5.0, which is far better than the average paint-application. There's also OmniPage LE, Presto Page Manager and VistaScan. You can use the scanner directly from Photoshop with the plug-in included, or from the front-panel buttons. The 6450 sports a transparency adaptor that can scan up to 4-x-5-inch trannies. The 6400 is identical, except that it lacks a transparency adaptor. For the price, both are capable scanners.



### Umax Astra 3400 / 3450

The Astra 3400 (pictured) costs just £49, but don't let that put you off. The thing with Umax is that it's a major scanner player, and provides the guts for many pro-end models from other makers. This gives it economies of scale that it passes on to punters.

The 3400 scans in 42-bit colour, using a top suite of software that includes PhotoDeluxe and OmniPage. There's an excellent button-control panel at the front, though the integration with the software isn't as impressive as with other models. Despite this, it does everything ever likely to be asked of it, and at under £50, you can't complain.

While the 3400 doesn't have a transparency adaptor, the £89 3450 does.



### Epson Perfection 1240U / Photo

The Perfection 1240U has wide-ranging software and hardware specifications – from high resolution to document-type recognition.

But its best feature is the way the software and hardware work together. The button on the front activates SmartPanel, meaning you're just one click away from scanning to print, OCR, an image editing app, email or any application. Epson isn't the only manufacturer to offer this, but it delivers it without a hitch – something few of the others can claim. There is another version – the 1240U Photo – that includes a backlight adaptor for trannies. Otherwise, this scanner offers everything the home or small-office consumer might need. It's a trouble-free choice at the right price.

Company	Umax
	<a href="http://www.umax.co.uk">www.umax.co.uk</a>
Colour depth	42-bit
Transparency adaptor	6450 only
Resolution	600-x-1,200dpi
Software	Photoshop 5.0 LE, OmniPage LE, VistaScan
Price	£129 (6450); £89 (6400)
Contact	Umax, 0870 906 4400

Value	■■■■■ 7
Ease of use	■■■■■ 7
Software	■■■■■ 8

Star Rating ★★★★★/8.2

Company	Umax
	<a href="http://www.umax.co.uk">www.umax.co.uk</a>
Colour depth	42-bit
Transparency adaptor	3450 only
Resolution	600-x-1,200dpi
Software	PhotoDeluxe 2.0, OmniPage LE, VistaScan
Price	£49 (3400); £89 (3450)
Contact	Umax, 0870 906 4400

Value	■■■■■ 8
Ease of use	■■■■■ 7
Software	■■■■■ 8

Star Rating ★★★★★/8.0

Company	Epson
	<a href="http://www.epson.co.uk">www.epson.co.uk</a>
Colour depth	42-bit
Transparency adaptor	1240U Photo only
Resolution	1,200-x-2,400dpi
Software	PhotoDeluxe, TextBridge, Epson Perfection software
Price	£129 (1024U); £188 (Photo)
Contact	Epson, 0800 220 546

Value	■■■■■ 9
Ease of use	■■■■■ 10
Software	■■■■■ 8

Star Rating ★★★★★/8.5

has a FireWire connection that speeds scanning slightly, but shaving a few seconds off is going to impress only the impatient. At least a FireWire connection allows the scanner to work at full speed without any bottleneck.

### Transparencies

If the reason you're buying a scanner is to to archive photo- or transparency archives and albums, then you should consider a model that offers a transparency adaptor. But please note, in this roundup, the scanners that include a transparency hood use static light, rather than the moving lamp seen in pro models.

The resolution chosen for scanning transparencies must be higher than for reflective images, because – unless using

medium-format film – the original image-size is always so small.

### Macworld's Buying advice

If you want a scanner for general home-use, then the deciding factor should be the bundled software on offer. Many of the models here are worth the money for the software alone – so a scanner with poor software can be represent a bad deal, even at the lowest price. The Artec Ultima 2000 is a case in point here. Also, a model with excellent software and button control will be usable by the whole family.

Physical size is also likely to be an issue, but bear in mind that many of the super-slim models are lighter on features than their bulkier counterparts. Such features will include transparency adaptors. **MW**



# Power presentations

Get to grips with Office 2001. Part 3: PowerPoint. By Nan Barber & David Reynolds

PowerPoint puts at your disposal a Spielbergian selection of special effects. In addition to the transitions you insert between slides, the program lets you animate particular elements in an image. It also allows you to add a soundtrack or voice narration to your slide show – features that are especially useful if you want to save the presentation as a standalone movie.

One of the simplest ways to jazz up a PowerPoint presentation is to animate an element in a slide – be it text, an image, or even a movie. Animated objects whisk into view when triggered by an advance key, then dart away the next time you press the advance key. You can control the animated object's path of motion, and also whether its action is accompanied by a sound effect.

As always, these effects do nothing to make up for lack of a meaningful message in your presentation, and seem primarily designed for making glitzy demos of PowerPoint at trade shows; use them sparingly and with good taste.

If none of the preset animations suits your fancy, you can fiddle with them to create an effect you like better. The Custom Animation window (see Animated pane) is the shop where you soup up animations and control multiple animations on the same slide.

To open this window, choose Slide Show Animations Custom, or click the Customize button in the Animation section of the Formatting Palette.

## Control is power

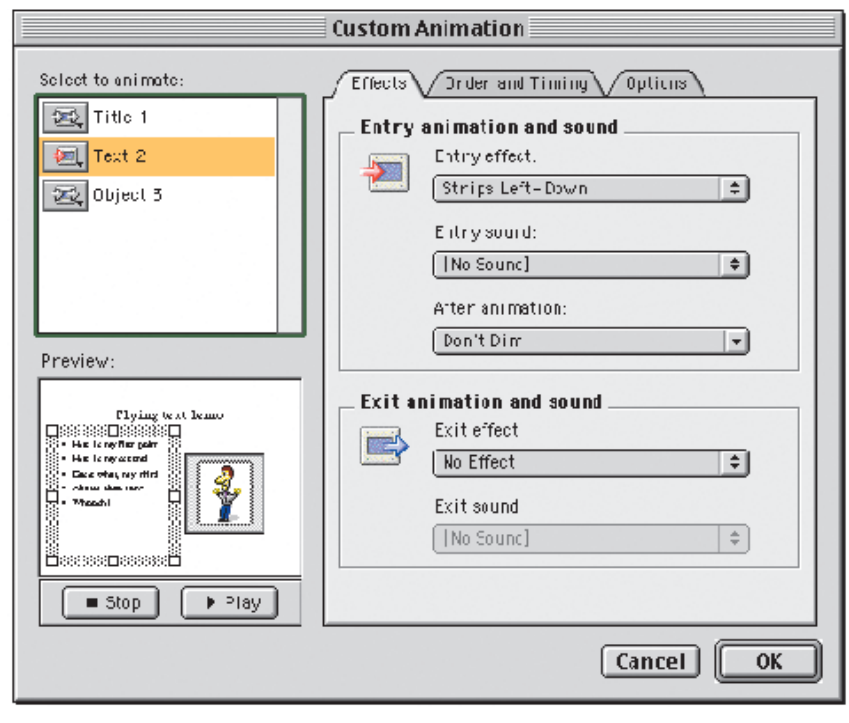
In the Custom Animation window, you can control almost every aspect of an animated object, such as how it enters or exits a slide and what sounds it makes. This is also where you let PowerPoint know which animations to trigger if you have more than one per slide.

The left side of the Custom Animation dialog box shows a list of all the text boxes, graphics, and other objects on the slide. To animate one of these objects or adjust the animation style you've already applied, click the one you want to work with.

Below that list is a preview pane with Stop and Play buttons; use these, if you

## Animated pane

The Animation Effects window is animation headquarters, your personal Dreamworks studio. Its pop-up menus give you access to a wide variety of animation effects – far more than the paltry 14 presets available through the Animations submenu. A word to the wise: Go easy on these effects, lest you drive your audience nuts.



wish, to show how your adjustments have affected the animation.

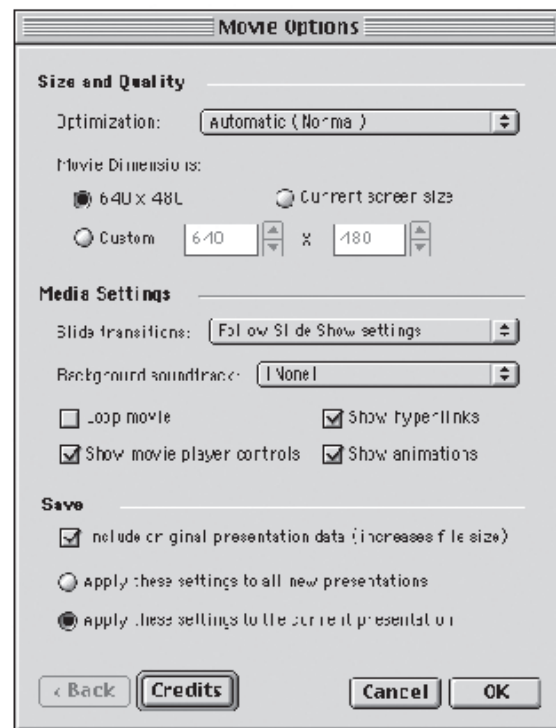
The Custom Animation window has three tabbed sections: Effects, Order and Timing, and Options. Here's an overview of their functions:

■ **Effects** Using the five pop-up menus in this section, you can choose what animated effect PowerPoint uses to whisk an object on or off the slide, and whether an effect happens with or without sound; you can choose from among

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# Movie magic

The Movie Options dialog box lets you specify the size of the QuickTime movie; 640-x-480 pixels won't fill most of today's 15-inch or larger screens. Using the "Background soundtrack" pop-up menu, you can choose an MP3 file or another file to play during the whole slide show – a handy option in self-running, demo situations.



the program's 16 preset sounds or select one from your hard drive. The Effects tab also lets you add a colour effect to an animated object after it has made its grand entrance on screen. That is, after a new bullet point has flown onto the screen in brilliant orange to get the audience's eye, you might decide that it should settle down into a more demure colour to match the other bullet points that have already arrived.

■ **Order and Timing** When you have more than one animated object on a slide, use this tab to specify their arrival order. (You see a list of all animations scheduled for the slide; after clicking a white area of the list to deselect them, you can drag an animated object's name up and down to rearrange it, or click one and use the up/down arrows to achieve the same end.) Come here, too, to tell PowerPoint how you want the animations to be triggered – either with a click of the mouse, or automatically after a given number of seconds.

■ **Options** This tab lets you set options for any other programs or media that you've selected to use as part of your presentation. For example, if you're planning to show a QuickTime movie clip, here's where you can tell PowerPoint whether to pause or continue the slide show while the movie is playing, and also whether to show the movie just once or to loop it continuously until you tell it to stop. If you

have text selected for animation, use this tab to choose whether it appears on the slide all at once, one word at a time, or one letter at a time.

Once you've customized your animations, click OK to close the window.

## Saving as QuickTime movies

With PowerPoint 2001 comes a great new feature: the ability to save presentations as QuickTime movies. This is a nifty idea for two reasons: Anyone with QuickTime installed – Mac, Windows PC, whatever – can play these movies even if they don't have PowerPoint; a great way for your associates and underlings to give the same kinds of pitches you give without having to spring for a copy of Office. Also, a presentation movie thus converted can be opened and edited in PowerPoint as if it were a PowerPoint file.

To turn an open PowerPoint presentation into a QuickTime movie, choose File Make Movie. This brings up a standard-looking Save dialog box, which you can use to name your movie file and choose a folder location for it.

Before clicking Save, however, you may want to fine-tune some settings in your movie.

To begin, click the Adjust Settings radio button. The Save button turns into a Next button, which, when clicked, opens the Movie Options window shown in Movie magic. The most important settings worth examining here are Movie Dimensions and the Optimization pop-up menu. The latter lets you specify which of these often mutually exclusive traits you value more as PowerPoint saves your movie:

To add a background soundtrack, choose Select Soundtrack from the Background Soundtrack pop-up menu. PowerPoint asks you to locate a sound file, which it then attaches to your presentation when you click OK. PowerPoint will mix the soundtrack sound with any embedded sounds, including voice narration.

Finally, the Movie Options window lets you decide whether PowerPoint adds the presentation data to the movie file. If you choose this option, you or your colleagues will be able to reopen the movie file right back into PowerPoint for further editing – but you'll make the resulting movie file much bigger on the disk.

## Saving presentations for the Web

The latest edition of PowerPoint lets you create presentation files that are formatted, coded, and ready to be posted on the Internet.

With just a few mouse clicks, you can save your slide show as a Web page, complete with some nifty JavaScript programming that gives viewers a new level of control over how they watch your show.

Before you move your presentation onto the Web, you'll first want to see how it looks after the conversion. To preview your presentation as a Web page, choose File Web Page Preview. PowerPoint generates all the necessary graphics, HTML, and JavaScript coding, then transfers the whole enchilada

into your browser. You can then use your browser to click your way through the presentation, which actually looks very much as it would if you were viewing it in PowerPoint's Normal (three-pane) view. To end the preview, just quit your browser to return to PowerPoint.

To save your presentation as a Web page (or rather, a set of them), choose File Save as Web Page. PowerPoint asks where you'd like to save your show. Clicking Web Options opens a window that lets you tell the program such things as what colours to use, where to place navigation buttons, how to encode images, and how you want files to be updated. Once you're satisfied, click Save.

PowerPoint automatically renders your presentation as HTML files (complete with embedded JavaScript) and Web-ready graphics files; you wind up with an index file (a home page) and a folder full of HTML files, graphics files, and sound files. You can upload these files to your Web server as you would any other Web page files.

## Saving slides as graphics

Among its many other gifts, PowerPoint allows you to save individual slides – text and all – as graphics files. This can be a handy little feature if, for example, you want to make sharp-looking, high-resolution images of your presentation to pass along to your friends and your agent.

To save a PowerPoint slide as a graphic file, first open the slide you want to convert, then follow these few steps:

1. Choose File Save As. A dialog box appears, offering several options.
2. From the Format pop-up menu, select a graphics file format. JPEG is a great choice for photos; PICT is, too, but it's a Macintosh-only format. Use GIF or PNG for smaller files, especially if you intend to use the resulting still images on a Web page.
3. Click Options. At the bottom of the resulting Preferences window, you can choose the file resolution, its dimensions (an important setting; you don't want your monitor to chop off part of the slides), whether to compress the file (smaller files, worse quality), and whether you want PowerPoint to save all the slides in the show as graphics or just this one.
4. Change the settings as desired, click OK, then name the still image and click Save. If you opted to save all of the slides, PowerPoint automatically creates a folder bearing your file's name. Inside the folder are the individual graphics files, with names like Slide1.jpg, Slide2.jpg, and so on.

## Printing your presentation

Although PowerPoint is primarily meant to throw images onto a monitor or projector, you can also print out your presentations on good old-fashioned paper—which is especially useful, of course, for printing handouts, overheads, and notes. Whatever the format, all printing is done through the same basic

# Animating on the fly

To animate an object using one of PowerPoint's ready-made special effects, first select the object you want to animate – for example, click inside a block of text or click an image.

Then choose an animation style from the Slide Show Animations submenu, which offers 14 different animations (plus an Off option to remove an animation).

A few examples:

- **Fly in** The selected object shoots in from the left with a swish sound and comes to rest at its rightful spot in the layout.
- **Fly out** The selected object pops off the slide and exits to the right with the same swish.
- **Fly in/out** The selected object flies onto the slide from the left and lands in its proper position, then, with another press

of the advance key, rockets off to the right. An audible swish accompanies both motions.

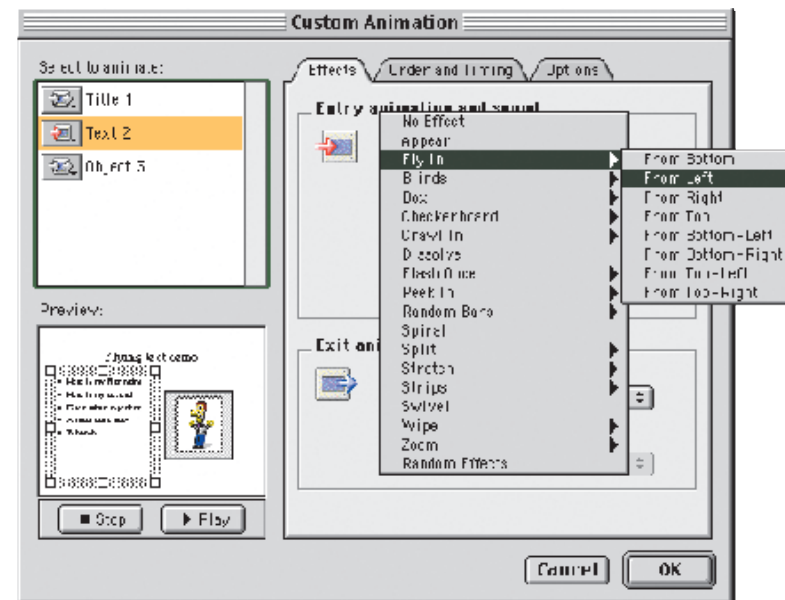
■ **Drive-in/out** The selected object enters the slide from the right and, with the sound of a car motor and screeching tires, skids into its resting place. Another press of the advance key sends the object off the slide to the left with the same infernal racket.

■ **Flash once** No sound here.

The selected object simply flashes once in a silent, subliminal kind of way.

■ **Dissolve** The selected object gradually materializes before your eyes, a few pixels at a time.

■ **Appear** In this, the simplest of all PowerPoint's animations, the selected item just pops into its predetermined spot on the slide.



procedure: Open the presentation you want to print, make a few adjustments in the Page Setup dialog box and the Print dialog box, then fire away.

Before printing your presentation, you should pop open the hood and take a peek at the Page Setup dialog box. After all, this all-important window is the engine that controls the size of your slides, whether they're for onscreen viewing or printing. Be sure to make any size adjustments early in the game; if you fiddle with the knobs in Page Setup after the slide has been made, it'll stretch to fit, possibly giving the image a warped or distorted look, or knocking certain graphics off of the edge altogether.

You can use the settings in this dialog box to morph your slide show into something

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There's more tips and hints on PowerPoint 2001 – in Nan Barber & David Reynolds' Office 2001 for Macintosh: The Missing Manual (Pogue Press/O'Reilly; ISBN: 0-596-00081-2). This article is the third of a series of Macworld extracts from the book, which costs £17.50 from all good booksellers. Next month: Entourage.

# Narrative style

If you're worried about laryngitis on the day of your presentation, if you're creating a self-running "kiosk" show, or if you have an unnatural fear of public squeaking, you might want to record voice narration for your slide show ahead of time. That way, you can sit back and relax while your confident, disembodied voice plays along with the show.

To add recorded narration to your presentation, you need a Mac with a microphone, of course; PowerBooks and iMacs have built-in mikes, USB microphones are available for Power Macs, Cubes, and iBooks, and older Power Macs came with a small plastic microphone and corresponding jack. You might want to visit the Apple Menu-Control Panels-Sound control panel's Input tab to make sure that you've selected the correct microphone for input. Quit all other sound-recording programs, if any are running. Then:

1. Choose Slide Show-Record Narration to bring up the recording window. This window shows the current recording settings, including the amount of space your narration will take up on your hard drive, along with your maximum recording time, based on your free hard-drive space. Since sound files can be huge, the "Link narrations in" checkbox lets you save your narration files to any location you like, such as an external hard drive with plenty of free space.

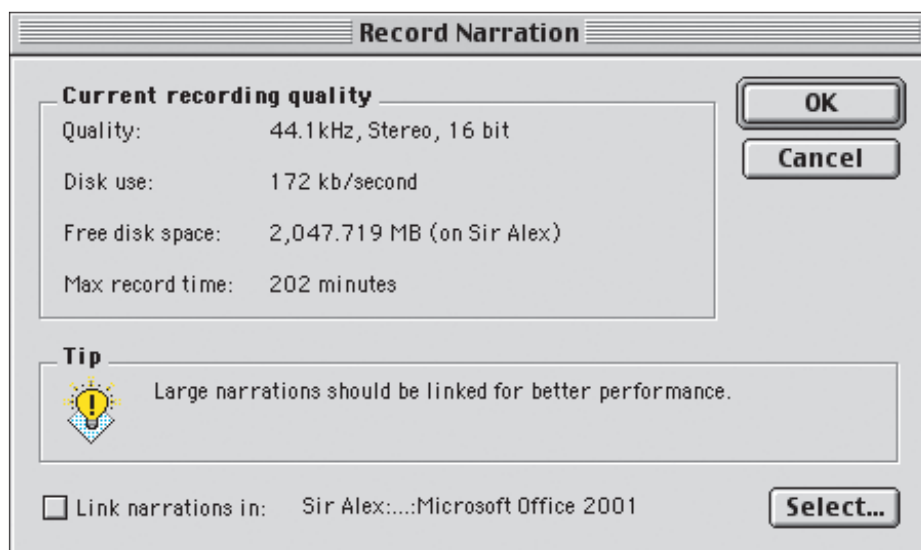
2. Click OK. PowerPoint starts running through your presentation. As you advance through the presentation, PowerPoint attaches the audio you recorded as a sound object on each slide. There's no easy way to re-record just one flubbed slide; for most purposes, it's simplest to start over with a new "take". (And if you're really having trouble, you can always record individual sound files for each slide.)

3. Record whatever you want to say on each slide; advance the slides as you normally would (by clicking the mouse, for example).

When you reach the end of the slide show, PowerPoint asks if you want to save the timings (to record the amount of time you spent on each slide) along with your narration. If you click No, PowerPoint saves only the narration. If you click Yes, it saves the timings along with the narration, overwriting any existing timings.

Narration is stored as an embedded sound file on each slide. If you choose not to include the timings, each sound will play when you manually advance to a given slide; that way, you can let the narration play and then have some discussion with each slide, moving on only when you're ready.

Once you're done recording your narration, you've got a self-contained slide show, suitable for parties or board meetings.



appropriate for another format—such as going from an overhead projector to a Web banner. This is the primary place in the slide show to control the size of your presentation. If you want to send your presentation out for printing, you can adjust its resolution by clicking the Options button in the Save dialog box.

## Print size

To open the Page Setup dialog box, choose File Page Setup. Doing so brings you face-to-face with Microsoft's version of the Page Setup box, which presents you with a pop-up menu offering preset slide sizes: Onscreen show, US letter, US ledger, A3, A4, B4, B5, 35mm slides, overhead, and Web banner. If you have a custom slide size in mind, you

can set its width and height here as well.

When you're ready to commit your presentation to paper, choose File Print (⌘-P) to bring up the Print dialog box. Here's where you tell PowerPoint exactly what you want to print—slides, handouts, notes, or an outline.

In the Print dialog box, find the General pop-up menu in the upper-left corner of the window. Select Microsoft PowerPoint in that menu to reveal the print settings window. Here, you can select which chunks of your presentation you want to print (slides, handouts, notes, or the outline); from this spot you can also choose to print a custom show (if you created one earlier). When you're ready, click Print to send your document to the printer.

MW



secrets:

OS X



# Apache engine

With the release of the Unix-based Mac OS X, Macintosh users gained access to the industrial-strength Apache Web server, part of OS X's standard installation. Apache software runs almost two-thirds of Web sites, and Apache Web server may be the most powerful Web server around. With it, a Mac becomes ideal for running a site.

Do you have something to say? If you have a broadband Internet connection, a static IP address, and permission from your ISP to run server software, your Mac can help you broadcast to the world – you don't even need a dedicated machine. We'll show you how to configure Apache and introduce you to its most powerful tool: Server Side Includes (SSI).

But the decision to run a Web server should not be made lightly. Depending on the volume of traffic your site receives and the size of the files you serve, Apache can use huge amounts of bandwidth and disk space. And while Apple has pre-configured Apache for maximum security, running any server – especially when used with database or script programs – may allow the bad guys to get into your files.

True to the spirit of the Mac, Apple has taken Apache – with its complex Unix origins – and turned it into extraordinarily easy-to-use software. To start the server, simply go to your Mac's System Preferences application, select Sharing, and click on the Start button under Web Sharing (see "Three-click setup"). This will activate the Web server and allow browsers to access Web pages within several of your Mac's directories.

The root, or starting point, of your Web site is in the `/Library/WebServer/Documents` directory. It's accessible on the Web at <http://12.34.56.78> (where 12.34.56.78 is the IP address in your Sharing panel, under Network Identity).

Try it yourself. Launch your browser and go to the aforementioned URL. If you're logged in as an administrative user – a visit to the Users pane of System Preferences will tell you which users have administrative privileges – you can edit `/Library/WebServer/Documents/index.html` and see the changes when you reload the page in the browser.

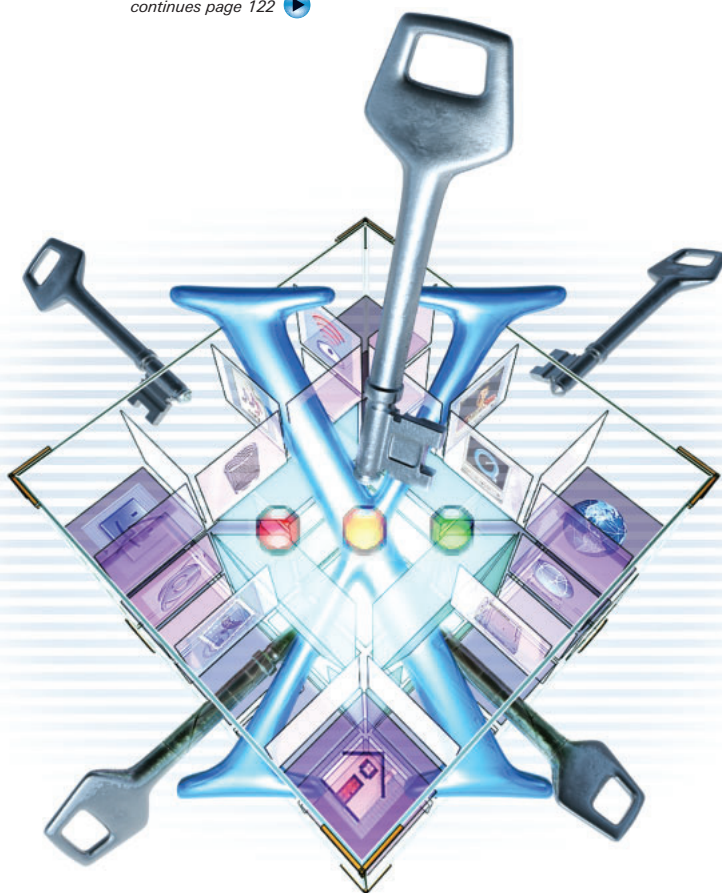
Congratulations – you're now running Apache on your Mac! Apache's options can make your site far easier to customize and maintain. But to use these features, you must leave the friendly Aqua environment for the wilds of Unix.

To enable the features you want, give yourself permission to edit the Apache configuration file and the directory it's stored in. To do this, change the security mode. While logged in as an administrative user, start the Terminal application and type the following command at the prompt: `sudo chmod g+w/etc/httpd/httpd.conf/etc/httpd`. Then enter the system password.

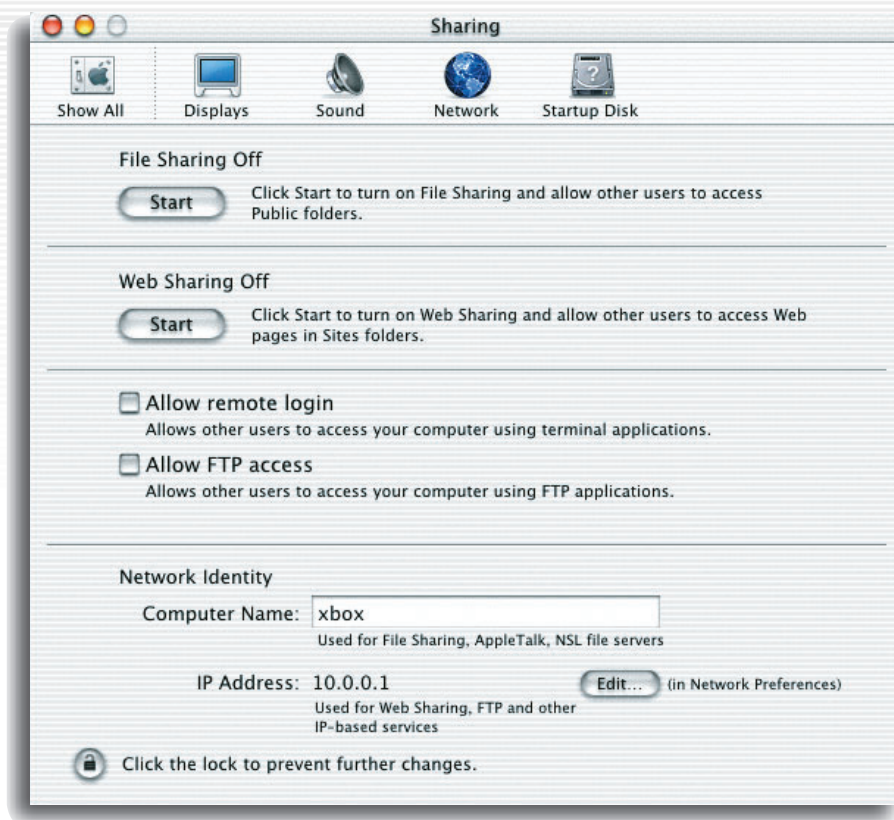
Now you can access Apache's configuration

*continues page 122* ➤

Thanks to Mac OS X, you can now run Apache, the most powerful Web server around.  
By Greg Knauss



MR. MURDOCH@BTINTERNET.COM



### Three-click set-up

To start Apache Web server, go to the Sharing panel within the System Preferences application and click on the Start button for Web Sharing.

**“True to the spirit of the Mac, Apple has taken Apache – with its complex Unix origins – and turned it into extraordinarily easy-to-use software.”**

file by typing its name, `/etc/httpd/httpd.conf`, into the Open dialog box in TextEdit. Be forewarned: this file looks like nothing you’ve seen on a Mac before. It’s more than a thousand lines of text, packed with hundreds of different commands and only the briefest instructions for their use. While there’s nothing to stop you from editing these options willy-nilly, it’s usually a good idea to read the relevant section of the Apache documentation – available at <http://httpd.apache.org/docs> – before you modify anything. If you ever hopelessly mangle Apache’s configuration, you can get safely back to square one by typing `cp/etc/httpd/httpd.conf.default/etc/httpd/httpd.conf` in the Terminal window to reinstall the defaults.

Apache has hundreds of configuration options, any of which you might find useful; we’ll focus on a couple of the most powerful.

Let’s begin with the Directory setting. It defines permissions for specific folders – determining what your site visitors are allowed to do within a particular directory. Each Directory setting begins with `<Directory/ some/directory/name>`, is followed by a list of settings, and ends with `</Directory>`.

For our purposes, don’t change the first entry, which includes Apache permissions for the root of your hard drive. Instead, skip down to the second Directory command. This entry loosens restrictions on your Web site’s `/Library/WebServer/Documents` folder, so you can serve files when they’re requested.

Although you can use several commands inside any Directory setting, the most interesting is the Options command, which is simply a line of text that controls what Apache will do with the files contained in the specified

directory. If you’ve turned on all the options we discuss in this article, it will look like this:

```
Options Indexes FollowSymLinks
Includes
```

For example, the Indexes option lets Apache generate an automated catalogue of files if no `index.html` file exists. If you want to hide the files and have site visitors see a “Forbidden” error message, remove Indexes from the list.

Also helpful is the FollowSymLinks option, which lets Apache read files anywhere on your hard drive if they are referenced by a symbolic link – the Unix term for an alias – in the `/Library/WebServer/Documents` folder. This allows one file to appear in two places – a text document can be viewed in a Web browser or downloaded via FTP. You can update one instance of the file and both will change.

The best option of all is Includes. This turns on Apache’s Server Side Includes (SSI) feature so you can assemble your Web pages on-the-fly. With abilities that’d cost you plenty in a commercial package such as Macromedia Dreamweaver, SSI lets you store your site’s common HTML – navigation, copyrights, JavaScript, really anything – in a few files rather than on each page, making sitewide changes quick and easy. You can add the current date, the time the file was last modified, and a host of more-complicated functions.

To enable SSI, return to the Apache configuration file and add Includes to the list of Options for the `/Library/WebServer/Documents` directory block. Next, tell Apache what type of Web pages to scan for SSI commands. Search the configuration file for server-parsed, and uncomment the needed directives by removing the number sign (#) at the beginning of two lines: `AddType text/html.shtml` and `AddHandler server-parsed.shtml`. With this configuration, only files with an `.shtml` extension will be checked for SSI commands. (If you want Apache to check every file on your site, change `.shtml` to `.html`.) To finish reconfiguring the server, save the file. Then restart Apache by going back to the Sharing pane of the System Preferences application and turning Web Sharing off and then on again. If the program fails to restart, you may have a typo in the configuration file. Run `httpd` from Terminal to display the specific error.

The SSI commands themselves are part of your HTML files. They look like HTML comments, beginning with `<!--` and ending with `-->`. Between those sets of characters, you specify what you want the Include command to do. For instance, `<!--#include virtual="/common.html"-->` replaces the text of the command with the contents of your site’s `/common.html` file – watch where you put your spaces.) To add the current date to a page, use `<!--#echo var="DATE_LOCAL"-->`. And `<!--#filesize virtual="/file.html"-->` will show the size of `/file.html`.

These are just a few of the SSI commands you can use on your Web pages. Between SSI and the power of Apache’s almost infinite configurations, you have a class Web server – without paying a penny extra.

**MW**





# Inflight safety

Find missing files before your repro house does. By David Blatner

**Y**ou can create and tweak your files using any programs you like, but if your pages don't print properly at their destination, you're sunk. Whether you send files to a repro house or a magazine's advertising department, you must prepare them correctly to avoid extra costs and headaches. In this inaugural column for print pros – veteran and new – I spell out steps to take with every file you hand off.

As any psychologist can tell you, the key to a good relationship is communication. And this holds true when you work with a repro house or commercial printer – before you start, ask questions.

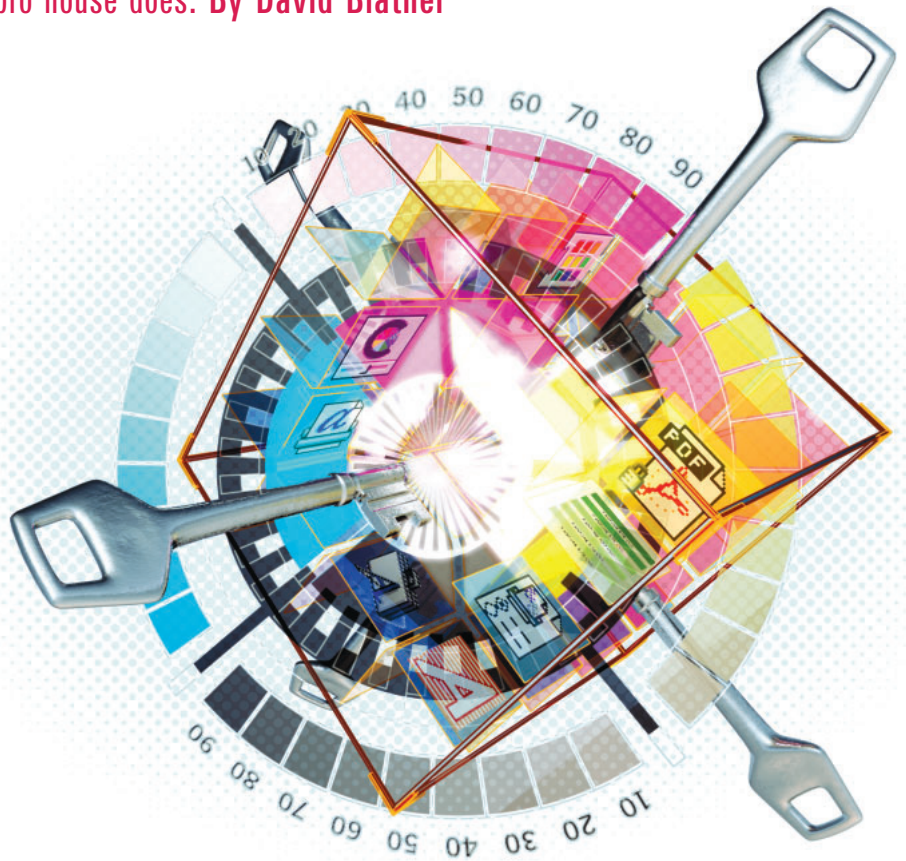
Because different repro houses prefer different file formats, ask whether yours wants a native file (for instance, a QuarkXPress document) or an Adobe Acrobat PDF copy of the file.

## Avoiding repro rage

I dislike sending native files; it's just too easy for someone to change them. However, photographer Jeff Schewe taught me a great safeguard: burn your files onto a CD, and send that. If there's ever a discrepancy, you can point to the "pure" file on the disc.

A PDF file is almost always a good option; the file can't be altered accidentally, and you're less likely to forget to include your fonts (or to make other mistakes discussed later in this column). However, most people have trouble printing PDFs that contain spot colours or duotones. In these cases, stick with sending native files.

It's crucial to include information about your documents when you hand off your files to a repro house; without certain details, the staff may not be able to print your files or troubleshoot if something goes wrong. Most shops offer a form that asks you for a complete list of fonts and graphics used in your document. You should also make clear your job's specifications, including whether you want crop marks printed at the page's corners, film or paper output, and so on.



QuarkXPress' built-in Collect For Output feature creates a report that includes most of the necessary information. However, many QuarkXPress 4 users don't realize that to make a legible report, they must import the data into the Output Request template. (Look for this template in the Documents folder, which is in the QuarkXPress folder on your hard drive.)

One of the biggest mistakes that you can make when you're preparing files for print is not carefully proofreading them both on screen and on paper.

Look at every word, preferably at a magnified view, to make sure it's correct. This may seem obvious, but many typos and

*continues page 126*

# Preflight check list

## Fonts

Include your document's fonts – outline and screen.

Include all fonts used in EPS files.

Use PostScript fonts instead of TrueType.

Make sure colour images are CMYK, not RGB

## Graphics

Check for missing or modified images.

Include EPS, DCS, TIFF, and JPEG files.

Make sure all graphics have the proper resolution (usually 1.5 times your halftone screen).

## Final check

Include a report with your files.

Include the document. (Don't laugh – sometimes this is the one thing people forget after a long day!)

Check your headlines – it's your last chance to prevent howlers.

**“The next time you're tempted to rely on a program's spell-checker, think of this: soft wear will not sea z this s wrung.”**

mistakes end up in print because people are too busy to proof files. The next time you're tempted to rely on a program's spell-checker, think of this: soft wear will not sea z this s wrung. (Most spell-checkers ignore single-letter words.)

If you get a file to print correctly, there's a good chance the service bureau can, too. Test-print your document on a PostScript laser printer. If it's a colour document, print separations to make sure that images separate correctly and that your overprints and knockouts act as expected. Incorrect or ambiguous trapping commands sometimes cause QuarkXPress to make type appear fat, and you can see this only on separations. Send these proofs to the service bureau with your file.

## Paper gymnastics

To save paper, you can use Adobe Acrobat (£205, [www.adobe.co.uk](http://www.adobe.co.uk)) as a software PostScript printer: distil your PostScript files with Acrobat (in other words, make a PDF file), and then proof your document on screen. If Acrobat can distil your file, your service bureau will usually be able to print it. But watch out: Acrobat cannot display halftones, and many people find it easier to proof colour separations on paper.

Most image problems boil down to one of three things: missing files, incorrect resolution, and problem file formats.

When you import an image into QuarkXPress or Adobe InDesign, the program typically embeds a low-resolution preview and creates a link to the external high-resolution version. So if you send your native document to a repro house, you should also send your TIFF, EPS, and DCS graphics files. Otherwise, the result will be a low-resolution, pixelated image (or a late-night phone call from someone asking where the files are).

Your image may turn out ugly and pixelated if its resolution is too low (that is, if you don't have enough pixel data for a high-quality print). You must save your photographic images with a resolution of about 1.5 times your halftone screen-frequency (the correct resolution is usually 120 to 150 ppi for newsprint and

200 to 250 ppi for the glossy paper used in magazines). Line art (in which each pixel is either black or white) must have a much higher resolution – 400 to 600 ppi for newsprint, and 800 ppi or higher for magazine paper.

When it comes to bitmapped data (for example, Adobe Photoshop files), use the TIFF format whenever possible – it's the easiest file format to colour-manage and print. Duotones must be in the EPS format, and images with spot colours must be in the DCS format. For just about everything else, I use TIFF.

Photoshop gives you several options for compressing TIFF files (LZW compression, for example). However, compressed files occasionally cause trouble at printing time.

When you turn your document into a for-print PDF file, be sure to deselect image downsampling and choose ZIP as the image-compression option in Distiller's Job Options dialog box. Otherwise, your pictures will become pixelated.

Nothing's worse than seeing your carefully chosen type print in an incorrect font or your lovely colours come out black. Fortunately, you have to watch for only a few mistakes.

## Untrue type

Most imaging bureaus have trouble printing TrueType fonts, and many prefer that you use PostScript Type 1 fonts.

Collect your files and graphics into a folder, and don't forget to add your fonts – the ones you used in your documents and those in your EPS or DCS files. Be sure to send both the outline fonts and screen fonts.

By default, every scanner scans in RGB mode. When you define a colour in QuarkXPress, it's based on RGB unless you tweak the settings. But in order for your colour pictures and objects (type, boxes, and so on) to print correctly, you need to change them to CMYK mode – unless you're using spot Pantone colours. If you send an RGB image to an imaging centre, it'll probably print only on the black plate.

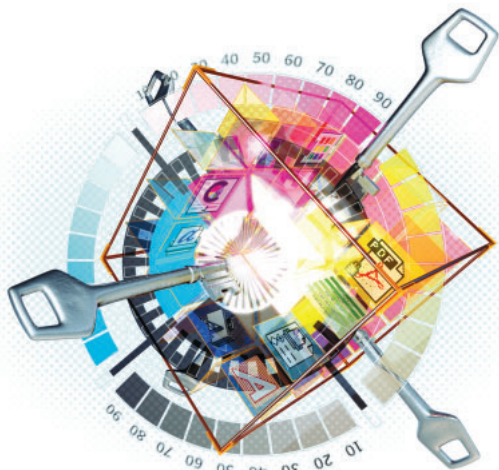
If you're willing to spend some money, several programs can help you get your files together and avoid mistakes.

If you use QuarkXPress, check out Gluon's £129 QC 4 with Collect XTension (XChange International, 020 7588 5588).

It can alert you to a number of potential problems in your document, such as images that are scaled too large. The great thing about this extension is that it gives you feedback while you're working on your document. When you're ready, QC Collect can also collect the fonts for you.

Preflight software can help find potential errors before you commit a file to print. Markware's £290 Flightcheck (XChange) and Extensis Software's £290 Preflight Pro (Computers Unlimited, 020 8358 5857) both check font usage, picture resolution, colour mode, and so on.

If you follow the steps we've outlined, you'll avoid the most-common errors and boost your odds of getting high-quality prints. **MW**





# Shortcut to success

Dreamweaver's find-&-replace feature is a real time-saver. By David McFarland

**M**aintaining a Web site involves daily chores, such as building new pages and removing old material. But comprehensive changes — say, swapping in a new company name on 10,000 pages — can mean many late nights of tedious work.

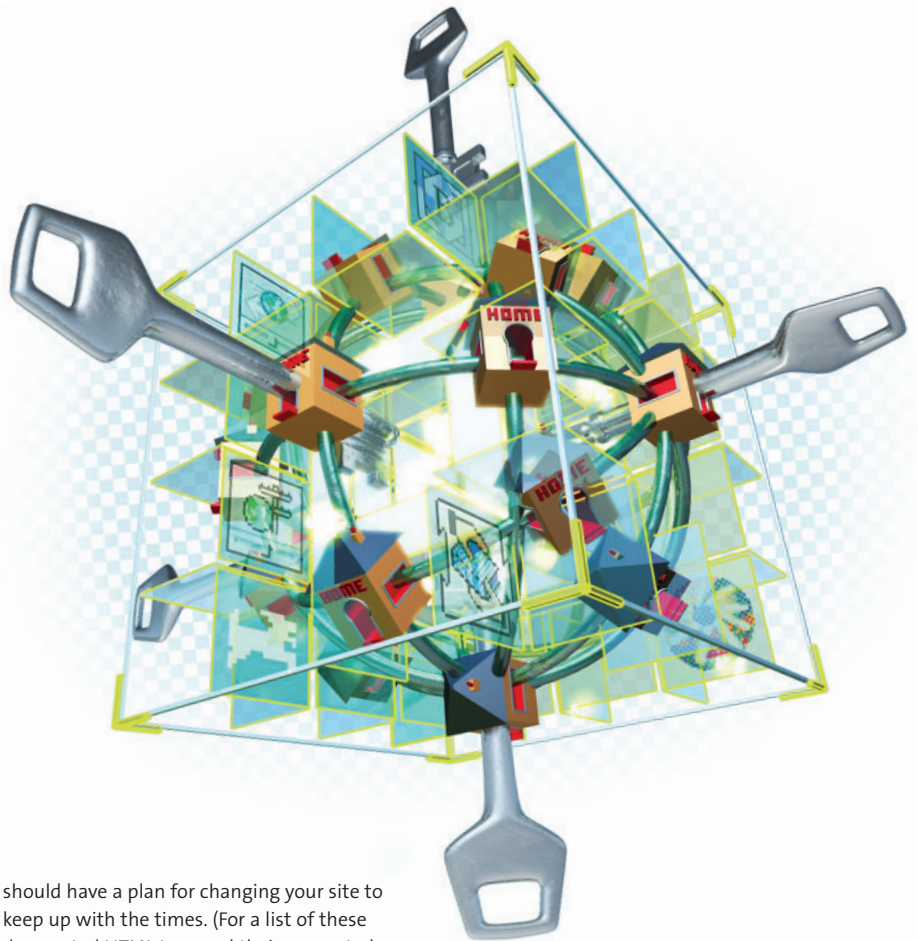
In the first installment of our new column for Web designers, you'll learn how Macromedia Dreamweaver's (£229; Computers Unlimited, 020 8358 5857) find-&-replace feature can get you home on time.

Imagine changing hundreds, or even thousands of Web pages in seconds. You can do it with Dreamweaver's find-&-replace command, which works much like the find-&-replace feature in programs such as Microsoft Word. Though in a word processor this feature affects only the current document, in Dreamweaver ([www.macromedia.com](http://www.macromedia.com)) you can use it to search multiple files. Just go to the Edit menu, open the find-&-replace window (or press **⌘-F**), and then select Entire Local Site from the Find In list. Be careful — changes to unopened files are permanent. It's a good idea to back up your site files before making widespread adjustments.

## Tag team

The ability to search an entire site and replace a word or phrase is very useful, but it's only the beginning of what Dreamweaver's find-&-replace feature can do. The command's most powerful option is the ability to find a particular HTML tag and perform actions on the tag, its attributes, or its contents. For example, you can use one of these Specific Tag searches to convert underlined text to bold by changing all `u` tags to `b` tags, or to remove every instance of a particular tag.

The World Wide Web Consortium ([www.w3c.org](http://www.w3c.org)), which determines HTML standards, may soon phase out some common HTML tags, such as the font tags used for formatting text. Although browser companies often deviate from standards, browsers may someday stop supporting these tags, so you



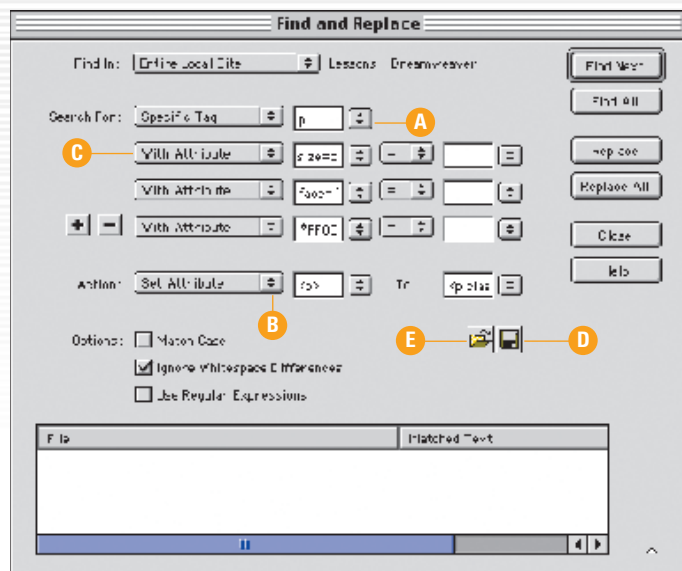
should have a plan for changing your site to keep up with the times. (For a list of these deprecated HTML tags and their suggested replacements, see [www.codehelp.co.uk/html/deprecated.html](http://www.codehelp.co.uk/html/deprecated.html).)

The most straightforward solution is to eliminate the tag altogether: open Dreamweaver's find-&-replace window and choose Specific Tag from the Search For menu. Select Font from the Tag menu, and then choose Strip Tag from the Action menu. Click on the minus (–) button to eliminate the unnecessary tag-modifier menu that appears below the Search For menu; then click on the Replace All button to finish the job.

*continues page 132* ▶

# Mighty find-&-replace

In Dreamweaver's find-&-replace dialog box, you can specify a tag to search for (A) and an action to perform on that tag (B). To refine the search, add one or more conditions using the tag-modifier menu (C). Click on the floppy disk icon (D) to save search parameters; click on the folder icon (E) to recall saved queries.



**“Imagine changing hundreds, or even thousands, of Web pages in seconds. You can do it with Dreamweaver’s find-&-replace command.”**

Simply deleting every font tag will leave your site awash with default text. Fortunately, you can use Dreamweaver's tag-based find-&-replace options to bring your site's formatting into the future with Cascading Style Sheets.

The World Wide Web Consortium intends Cascading Style Sheets (CSS) to eventually replace font tag formatting. In addition to supporting the font options – colour, size, and typeface – CSS lets you add leading, margins, borders, and other advanced typographic properties. (For tutorials and an introduction, visit Webmonkey at <http://hotwired.lycos.com/webmonkey/authoring/stylesheets/>.)

If you've used HTML tags to structure your pages logically – for example, applying heading tags (h1 to h6) to headlines – you're in good shape. Just create a style with the desired properties for the heading tag, choose font from the tag menu, click on the plus sign (+), select Inside Tag from the drop-down tag-modifier menu, and choose the appropriate tag.

Things get trickier if you've used several permutations of the font tag to format your text. Say a page contains four paragraphs identified by the p (paragraph) tag. Three of the paragraphs contain the body text and are formatted in dark blue using the font tag. But the fourth paragraph contains a news announcement that's red, in a different font and size. Ideally, you'd create separate styles for body text and news announcements and apply them to the appropriate paragraphs. For example, to apply a style called “announcement” to a paragraph, add the class attribute to the p tag, like this:

```
<p class="announcement">
```

The difficulty comes in identifying and

applying a class to just the paragraphs containing news announcements. In Dreamweaver, the best way to handle this is to use the unique combination of tags and attributes that format your text as the search pattern in a find-&-replace operation. In the previous example, if you'd originally used `<p font size="5" face="Arial, Helvetica, sans-serif" colour="#FF0000">` to format the announcement, that's what you'd type in to pinpoint your search. Once Dreamweaver finds the appropriate tag, you can add a style to update it, and then apply it to every page on your site with just one click.

Adding textual descriptions in each image's alt attribute helps visitors who are surfing without graphics or who are visually impaired – but it's easy to overlook this important step.

Let's say you use a graphic named “banner.gif” on each of a site's 2,000 pages, and you need to set that image's alt attribute quickly. Open the find-&-replace window. To search every file in your site, choose Select Entire Local Site from the Find In menu; from the Search For menu, choose Specific Tag.

Next, select the img tag to search for images. But you don't want to find every image, so you should set several tag modifiers to limit your search. Choosing Without Attribute and selecting alt from the menu will bring up only images that don't have an alt attribute.

## Location, location, location

The final part of this search is a little tricky. Although you know you're looking for the “banner.gif” graphic, the src attribute – the part of the img tag that includes the file name – will vary from page to page. Depending on a page's location relative to the graphic, the src might be “banner.gif,” “images/banner.gif,” or even “../../images/banner.gif”. You need a way to find every src attribute that ends in “banner.gif”. The solution is to use a regular expression – a set of special characters that let you find patterns within text.

In Dreamweaver's find-&-replace window, select the Use Regular Expressions option. In our example, you're searching for a particular pattern of zero or more characters followed by the text “banner.gif”. A period (.) stands for a single character such as a letter, number, or punctuation mark. An asterisk (\*) means “find the preceding character zero or more times.”

So combining . and \* means “match any character zero or more times”. By themselves, these two characters match everything, but with the name of the file added to the end – \*.banner.gif – the search will yield every path that leads to the file.

All that's left is to tell Dreamweaver what to do when it finds “banner.gif”. Choose Set Attribute from the Action menu; select alt from the Attribute menu. In the To field, type your text. Click on the Replace All button, and Dreamweaver will take care of the rest.

Dreamweaver's find-&-replace command will eliminate hours of unfulfilling grunt work so you can spend your time on the fun, creative side of Web development.

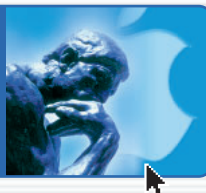
MW



**Your tip of the month wins an hp deskjet 990CM**  
We reward the tip of the month with an hp deskjet 990CM, worth £279. This graphite colour-printer offers amazing image quality and speed, and is bursting with gadgetry and cool extras.



Q&A/tips



- PowerBook audio • IE stability • Secure connections

# Q&A/tips

Handy Mac tips and readers' questions answered. By Christopher Breen

## The fury over sound

**Q** I recently purchased a PowerBook G4 and, to my dismay, saw that it had no audio-input port. I'd hoped to digitize my record collection and turn it into MP3 files. Is there any way I can do that with this PowerBook?

Cindy Scott

**A** If you follow Apple's marketing machinations, you know that Apple would like us to view the Macintosh as a "digital hub" – a go-between device for such delightful doodads as MP3 players, camcorders, digital cameras, and DVD players. Regrettably, some recent incarnations of this hub lack one very important spoke – audio input. For reasons best known to Apple, the audio-input port that has graced the Mac since the mid-Thatcher era has been stripped from the latest models.

Many audio enthusiasts – and others keen on speech-recognition software – will gnash a bicuspid or two over what appears to be Apple's penny-wise, pound-foolish policy. But I prefer to view this as Apple's way of providing new opportunities for third-party developers.

This means that you can bring the scratchy soul of your old Wilson Pickett records into your new PowerBook with the help of a USB audio-input device, such as Griffin Technology's iMic (Alta Technology, 020 7622 6606). This £35 thingamabob looks like a miniature yo-yo and features both an audio-input and -output port. You can use it with a microphone, or with line-level devices such as your CD player or stereo receiver. And because the iMic uses Apple's native Sound Manager driver, there's no need to install additional software – though the iMic's control panel lets you adjust audio gain.

Of course, with the iMic in place, your Mac still requires some kind of software to record those ancient vinyl platters. A number of wonderful audio editors on the market will serve your needs, but I'm particularly keen on a program called Sound Studio from Felt Tip Software (\$35; [www.feltip.com](http://www.feltip.com)). Sound Studio is a simple, two-track audio editor that, unlike many inexpensive competitors, is disk-based. This means you can record much larger audio files than you could with RAM-based audio editors. (Although Felt Tip has released a Mac OS X version of Sound Studio, at press time it did not support

recording.) If you're looking for a multitrack recording solution, take a gander at Digidesign's free version of ProTools ([www.digidesign.com](http://www.digidesign.com)).

And should your ramble down life's road lead you to a career in audio and multimedia, know that there are many professional audio-input devices on the market. These products – from companies such as Roland, Mark of the Unicorn, Tascam, Digidesign, and Yamaha – let you bring high-fidelity audio files into your Mac via either its USB or FireWire port. Audio daddies whose Macs have PCI slots will be pleased to learn that Creative Labs (Ingram Micro, 01908 260 160) has brought its £150 Sound Blaster Live audio and MIDI card to the Macintosh.

## OS X startup items

**Q** How do I set up an application as a startup item under Mac OS X?

Tim Warner

**A** If you've dinked around with Mac OS X, you already know that it lacks a Startup Items folder like the one found in previous versions of Mac OS. With OS X, to designate an item as one that launches at startup, you must open the System Preferences application – which is found under the Apple menu or in the Dock – and click on the Login Preferences icon. In the window that appears, you'll see a list of applications set to launch at startup. To add others, simply click on the Add button and navigate to those applications.



## DV connectivity

**Q** I'm about to buy a digital camcorder and was hoping you could tell me the best way to output my edited movie to a VCR without shelling out for a camera with DV-In. I was thinking a card would be the best way, especially with my Power Mac G4, but I am having trouble finding one.

Jack Fabian

**A** Your best option is the £319 Formac Studio (see Reviews, June 2001). Not only will it add DV-In to camcorders, but it also digitizes signals from analogue cameras. In addition, it allows Macs to play TV and radio.



Check out this month's cover CD for *BrickHouse\_1.1b5.dmg* and *Sound Studio 1.5.5*.

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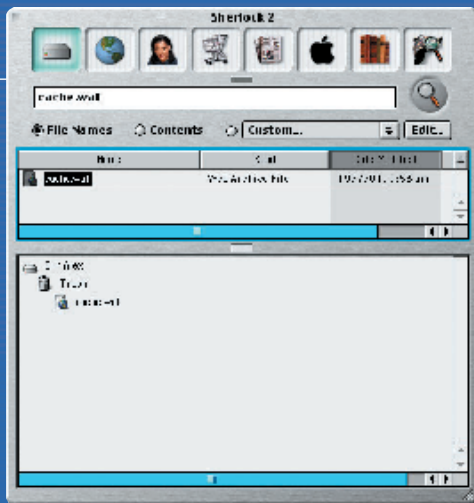
## Tip of the month: IE stability

**TIP** If Microsoft Internet Explorer (IE) fails to launch, the problem may well be a corrupted cache file.

The cache is essentially a library of GIFs and TIFs that the browser stores to speed-up Web-page downloads. The larger your cache (you can set this in Preferences), the more images it will contain and the likelier it is that it'll freeze IE.

To clean out the cache, perform two Sherlock searches – one for cache.lck and another for cache.waf. Drag each of these files from Sherlock to Trash, and restart your machine. IE should now launch with no problem.

Lisa Horton



Congratulations to Lisa Horton. She wins an hp deskjet 990CM printer. If you think you have a Tip of the month, send it to: qanda@macworld.co.uk

Because some programs can be sluggish when launching in OS X – particularly on slower Mac models – I've put this feature to good use: I added a load of applications to my launch-at-startup list. You see, I'm far more willing to grab a cup of tea while I wait for my Mac to launch all those applications at once, than to count icon bounces in the Dock when I launch them one by one.

To give you an idea of how I do things, my Login Items window contains OmniWeb, Eudora, Microsoft Word, DragThing (a wonderful file-launching utility), X-Assist (which adds an application menu to the right side of OS X's menu bar), and the System Preferences application itself. I've also configured the Classic environment to load at startup, by launching Classic System Preference and selecting the Start Up Classic On Login To This Computer option in the Start And Stop pane of the Classic window.

### Gaining access

**TIP** I've put a lot of work into creating a Microsoft Access database containing information about my DVD collection, and I would like to use the database with my new PowerBook G4. I understand that Microsoft doesn't make a Mac version of Access. Is there any way I can use this file with my PowerBook? Jamie Dickie

**A** I'm pleased to hear you've put a lot of work into this DVD database – it demonstrates that you're the kind of person who's willing to part with a few ounces of good, honest sweat in the pursuit of a desired result. I bring this up, because while there's every likelihood that you can use the data in that file on your Mac, you'll have to toil to create a Mac version that's as finely polished as the Access database you now have. Allow me to explain.

You can't just launch any old database application, and then open whatever database file you want from within that application. Unlike text and graphics documents that can be opened using a variety of applications, database files are generally in a proprietary format that can't be opened natively in another database application. You can't, for example, move the Access file over to FileMaker or AppleWorks, and expect it to open with everything

laid out as it was in the original file. Instead, you must open Access on the PC and export your data in a form that your Macintosh database is likely to understand – as tab-delimited text or an Excel file, for example. Then construct a layout in your Macintosh database application that mimics the layout in the original file – in your case you'd include fields such as DVD title, actors, director, producer, run time, and personal rating. This Mac database application can be as rudimentary as the database component of Apple's £55 AppleWorks (0800 039 1010) or as sophisticated as the £219 FileMaker Pro (FileMaker, 01628 534 158).

To bring data into AppleWorks, open your newly created database – with the layout matching that of your original database – choose Insert from the File menu, and then select the exported file you created with your old database. Line up the fields so that they correspond and click on OK to import your old data. With FileMaker, the procedure is the same except that you choose Import Records from the File menu.

### Locked mail

**TIP** If, like me, you've opened OS X's Mail application only to be greeted by a message that indicates that such-and-such mailbox is locked, there's a reason. The Mail application will produce this error message if Mail was not properly shut down (if you force-quit the application, for example), if you've changed the Mac's network connection with Mail open, or if two or more accounts are configured to place messages in the Personal Mailboxes Inbox.

You can usually work around this error by simply selecting the "Open anyway" option and silently cursing the application for not just opening the darned thing without this kind of intervention.

### Cable mismatch

**TIP** The composite video cable that ships with the new FireWire-capable, all-white iBook is not interchangeable with similar-looking video cables that sometimes ship with camcorders. Because the Apple-created cables use their own unique wiring scheme, employing a third-party composite

## Secure Net connections

**TIP** I recently installed a DSL connection in my home, and I've read that if you have such an always-on link to the Internet, you should have a firewall. Is this true? If so, should I use a hardware firewall, or is a software firewall secure enough? Nathan Weeks

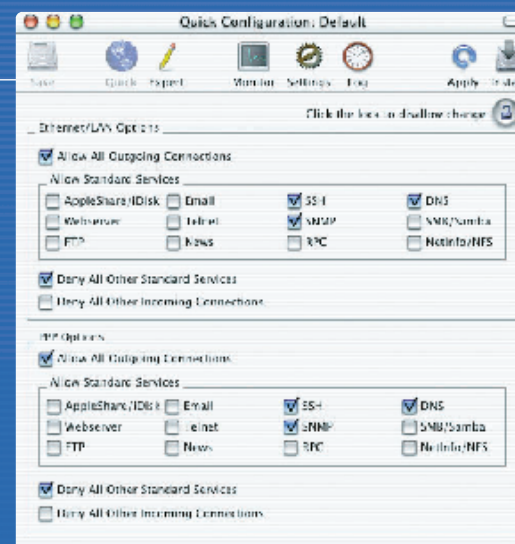
**A** Broadband connections such as ADSL, cable modem, and satellite have brought many of us – along with the ability to download massive movie trailers for films we have no intention of viewing – concern similar to the one reflected in your question. Far be it from me to suggest that the companies that market software and hardware firewalls have fed consumers' paranoia by depicting a Web peopled with miscreants. But honestly, for most of us, the level of security provided by a firewall is not worth losing sleep over.

To begin with, most "attacks" from the Web come in the form of port probes by techno-weenies who have failed to develop more-wholesome outside interests. While such probes are annoying, they rarely lead to the takeover of your Mac by a hostile foreign government; for the most part, these weenies just want to see if they can access your computer. It's unlikely they'll return to pilfer your carefully assembled database of North American garden beetles. Secondly, the Mac OS is reasonably secure – more so than, dare I say it, the many flavours of Windows. Under the

pre-X versions of Mac OS, you can tighten that security by switching off the Enable File Sharing Clients To Connect Over TCP/IP option in the File Sharing control panel. With this option turned off, it's much harder for malefactors to access your Mac from the Web. In addition, you can simply turn your Mac off at night: this will ensure that no funny business takes place during your eight hours of the dreamless.

For those who'd rather be safe than sorry, I suggest Intego's NetBarrier (£42; 0883 745 111), a software-firewall application. I've installed NetBarrier on my league of Macs and then run some Internet-based port-probing utilities, which found that my network now is indeed far less visible to prying eyes. There are, however, situations in which you're better served by a hardware firewall: when you have a mixed network of PCs and Macs holding data vital to your business, for example. In such cases I recommend the £126 EtherFast Cable/DSL Router, from Linksys (Ingram Micro, 01908 260 160).

Mac OS X, on the other hand, is a



### It's mighty mighty

Brian Hill's \$25 BrickHouse ([http://personalpages.tds.net/~brian\\_hill/brickhouse.html](http://personalpages.tds.net/~brian_hill/brickhouse.html)) allows you to configure Mac OS X's built-in security features via this user-friendly interface.

different kettle of flounder. Few of us are sure how resistant Apple's new OS, with its Unix underpinnings, is to Internet attack. For this reason, I've downloaded and installed Brian Hill's \$25 shareware program BrickHouse, with which you can easily configure the firewall settings built into OS X (see above).

cable is likely to result in funky audio – and I do mean "funky" in its worst sense – and no video.

### Final Cut crash

**TIP** If you have the Audio Meter window open in Final Cut Pro 2, the program may quit unexpectedly or crash. This is more likely to occur if your Mac has more than 1GB of memory. To avoid this situation, keep the Audio Meter window closed.

### Saving AppleWorks for Windows

**TIP** If you plan to send an AppleWorks document to someone using the Windows version of AppleWorks, be sure to append the .cwk file extension on the end of your saved files (for example, chrisdoc.cwk).

### Deep-down scripts

**TIP** If you've ever wondered what's going in the darkest recesses of your Mac, it takes a simple AppleScript only to find out. tell application "Finder" activate select some item of temporary items folder set opensesame to make alias to

selection reveal original item of opensesame end tell

This script will run into an error if the Temporary Items folder is empty.

Phil Groom

### OS X Finder commands

**TIP** Under the Classic Mac OS X if you hold down the Option key, some Finder and application commands change. For example, hold down the Option key and click on the Finder's File menu, and the Close command changes to Close All.

OS X offers this same feature with this difference: when a menu is pulled down, pressing the Option key updates menu commands in real time. That's right, if you have the Finder's Windows menu pulled down and press the Option button, you'll see the Minimize Window command change to Minimize All Windows.

### No assistance

**TIP** If you've launched AppleWorks 5 and clicked the Use Assistant or Stationery button only to find no assistant is available, here's why: you may have moved the AppleWorks app out of the AppleWorks 5 folder. To put things right, move it back in.

## iTunes shortcuts

Here are some cool keyboard commands you can use in Apple's iTunes:

KEY	FUNCTION
H or ?	show help
F	toggle frame-rate display
T	toggle frame-rate capping
I	display track info
D	reset settings to default
M	select configuration mode
R	new random configuration (with caps lock key added, configuration is displayed as it changes)
C	display current configuration
Q and W	change pattern
A and S	change shape
Z and X	change colour
B	show Apple logo
N	toggle between high-contrast and normal-contrast colours

Zeke Runyon

Macworld's chief sub-editor Woody Phillips and contributing editor Christopher Breen answer readers' questions and select reader-submitted tips for this column. Send your question or tip (include your address and phone number) to Q&A, Macworld, 99 Gray's Inn Road, London WC1X 8UT. You can also send an email, marked Q&A in the subject line, to [qanda@macworld.co.uk](mailto:qanda@macworld.co.uk). We pay £25 for each tip published here. We cannot make personal replies, so please do not include a stamped addressed envelope.



# Andy Ihnatko



For an application to be great, its makers must understand what Macs are all about.

## BB king of Mac

'Great software stays "on message" more readily than a Blair Babe.'

My word processor cannot use graphics. It won't let me create custom headers and footers, format a page in columns, or define style sheets. If at any point during a project I were to see a cartoon Macintosh Classic somersault into view and advise me on how to write a proper business letter, it could mean only that I should quit drinking during work hours.

My word processor is Bare Bones Software's BBEdit, and it's not technically a word processor: it's a text editor marketed to software developers and Web designers. But who cares? It's the app I usually hold up when I want to explain the Rules of Great Software, because it underscores the concepts upon which all truly great software is built.

**Rule 1: Be yourself** When designing an application's feature set, lots of half-arsed solutions do not a whole arse make. Often, you install a piece of software and find that it's a steaming pile of almos. There are features that are almost useful, and therefore merely utilitarian, and interfaces that are almost subtle and therefore... well, at least not Microsoft Word 6.0's.

Even as BBEdit has broadened its scope and utility, Bare Bones has never allowed it to become anything more than a text editor. Why don't the people at Bare Bones let BBEdit parse basic HTML tags, and thus let you see boldface and italic type as you code Web pages? Because that's a word processing feature. Why do they include FTP functionality? Because in many cases, text files reside on remote servers. So why not enhance those features beyond simple Open and Save commands? That's the realm of the FTP client, not the text editor. Et cetera, et cetera, et cetera.

**Rule 2: Play nice** And why should Bare Bones waste time by competing with the makers of Fetch when it's much easier to integrate BBEdit with other products and refer users to their download sites? Great software always plays nice with the other children.

Perhaps the biggest insult you can inflict upon an app is to hit ⌘-Q. You're telling that poor app that you can live without it. On my Mac, BBEdit is always running; it's too valuable to close. The program's AppleScript support is top-notch. If BBEdit is open on my Mac, any other AppleScript-savvy application can take advantage of BBEdit's text-manipulation strength.

**Rule 3: Support standards** That's because BBEdit's search-&-replace isn't just powerful, it's *Star Wars*' Death Star powerful. BBEdit's search uses grep, which can, with a single formatted search-&-replace, translate Valley Girl-

speak into the archaic regional patois spoken by ancient Highland-tribes – and I'm not talking *Braveheart*.

The support of industry standards is a force multiplier for any app. Many potentially great programs are sunk by Not Invented Here syndrome: if the company didn't invent it, it's not interested.

Taking advantage of grep's power often seems about as easy as turning a washing machine into a working bicycle using raw steak. But that's OK because, once you've learned grep somewhere, you can apply that knowledge anywhere in the computer-using universe, and the target users are geeks – people who'd think: "Well, obviously I'd use a crown roast. I could grind those ribs into a whole set of useful tools!"

**Rule 4: Act like a Mac app** A Mac app should look like a Mac app! This is readily understood these days.

And while it's astonishing that BBEdit has never crashed on me and taken an unsaved manuscript with it, people who expect modern apps not to crash also expect Mummy and Daddy never to fight in front of the children. Still, BBEdit gets full points for Mac-ness, and also for doing lots with minimal memory and processor resources.

**Rule 5: Know thyself** Great software stays "on message" more readily than a Blair Babe. If an app's developers are unclear about its true character and purpose, its users sure won't stand a chance.

BBEdit serves as a perfect example of a great app. But is it a great word processor? Nope. It's become a usable word processor thanks to the fact that in 2001, text files rule. Content isn't a pretty, formatted, ready-for-print document; it's merely a nugget of text other software can repurpose for print, or the Web, or an eBook.

Besides, the power of BBEdit lies not in its feature set, but in its philosophy. It's my word processor, but it's also a box of potential. With some AppleScripts, it turns a block of text into a new entry on my Web site. It's occasionally my email app: I can search a 40MB file of archived mail far faster with BBEdit than I can with my mail client.

A new tradition has been added to the Ancient Geek Meeting Ritual: newcomers to the tribe must reveal and then defend their choice of pocket multitool. Occasionally you'll see someone show off a battered old Craftsman screwdriver and praise the fact that it can be used as a chisel, a hammer, or a digging tool. That's BBEdit.

It's not what an app does. It's what you can do with it. And that, dear readers, is the most hallowed Macintosh rule of all.

MW

